DISCUSSION PAPER #3

IMPACTS OF A CHANGE IN THE METHOD OF PAYMENT OF THE CROW BENEFIT

PREPARED FOR

THE AGRICULTURE ADVISORY COUNCIL

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January, 1990

90-04941/

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EXECUTIVE SUMMARY - SECTION I

Cattle

The Manitoba livestock slaughter and processor sector would benefit from a change in the method of payment, but the extent to which they do so depends on a resurgence in livestock production and feeding patterns. Therefore, new plant investment would depend not so much on the absolute increases in slaughter cattle production, as on historical levels of feeding of cattle being restored. A change in the method of payment would do this, encouraging feeding within the province and providing the impetus for all the prairie provinces to dismantle their feedgrain assistance programs.

Hogs

Feedgrain accounts for about 60 percent of the cost of producing a hog; thus, the availability of competitively priced feeds is a key element in a competitive pork industry. As shown in the previous discussion paper on the analysis of production shifts, with a change in the method of payment and a decrease in the price of feed grains, hog production is likely to expand, estimated at 525 thousand head in the long run depending on the scenario examined.

As processing levels in the past have been close to hog production, it is assumed that this would continue and that the projected production volume would equal projected processing volume.

Any plant investment in hog processing in Manitoba is significant because of its relatively high multiplier effect. That is, the economic activity related to the transportation, slaughter, and further processing of pork is much higher than for beef processing. Therefore, any increase in pork processing has an impact for not only the industry itself, but also the economy as a whole.

Feed Mills

A change in the price of inputs such as the price of canola, barley and other feedgrains; and a change in volume of cattle production, along with a possible impact on the beef processing sector, can all potentially have an impact on the feed manufacturing industry in Manitoba.

These changes would impact positively on the feed manufacturing industry, whose costs for raw inputs would decrease and demand from expanding livestock sector would increase.

Canola

There are three main ways in which a change in the method of payment would affect canola pricing: (i) processors would be able to buy lower priced canola seed, (ii) the increased livestock production would expand the local market for canola meal, and (iii) processors would have access to an increased supply of canola seed. The first of these is expected to have the greatest and most direct effect on processors and would be reflected directly in their crush margins.

It is expected that the processing industry in Manitoba, if such a change in canola prices were to occur, would increase production and see improved profits.

Flaxseed Processing

If a local meal market could be developed as well as the overseas oil market, a change in the method of payment could provide some incentive for flaxseed oil and meal production.

EXECUTIVE SUMMARY - SECTION II

The key finding of this study is that a "simplistic" change in the method of payment to a pay the producer system will lead to much greater pressures for further changes, especially in the regulatory environment in which the grain handling and transportation system operates. An increase in the flexibility of the regulatory environment is analyzed as being necessary for the existing elevator and rail system to effectively compete with commercial trucking under a pay the producer system.

Transport and Handling Costs

WGTA rates for shipment to Thunder Bay are higher (0-$10./t) than commercial rates would be for much of Manitoba. A shift away from the existing elevator and rail system could occur if WGTA rates were levied without also revising a variety of regulations including the current handling tariffs at primary and terminal elevators. Adopting commercial rates for hauling grain would require the removal of some of the regulatory policies and practices which the grain and rail companies currently face to allow them to compete with alternative modes of transport, especially trucks.

While transportation and handling costs via New Orleans would be comparable to Canadian routes if current export standards are adhered to and if commercial rates are adopted on Canadian routes, the required institutional and operational arrangements make the use of this route unlikely.

Individual state legislatures might object to Canadians competing for use of U.S. facilities on a transportation route that is highly subsidized by the U.S. taxpayer during high volume years when the system capacity is being fully utilized handling U.S. grain.

Impact of Production Shifts on Transportation and Handling

The production shifts which would have the largest impact upon the transportation and handling infrastructure are the quantities of barley and canola produced for export. The south central region would likely be the most dramatically impacted by increases in barley production and decreases in export quantities.

The rise in local consumption by canola crushers and by expansion in the livestock industry would translate into a substantial increase in the amount of local and interregional trucking from current levels. This needs to be analyzed further to identify its significance - it might exceed all of the other changes in truck traffic attributable to changes in the freight rate structure.

The increase in local consumption of these grains would reduce export volumes of barley and canola by up to 500,000 to 700,000 tonnes per year. This would translate into approximately 25 fewer elevators in the fully rationalized system than would be the case under the status quo.

Institutional Impact of a Change from the Status Quo

Reducing the cost of handling in the existing Transportation & Handling System would entail increased flexibility in the regulations applied to the elevator operator in obtaining delivery of grain and obtaining rail cars for the shipment of that grain. A review of the quota system and the car allocation process would also be needed to increase the competitiveness of the current system with truck competition.

Accelerated rationalization of the elevator system would be necessary to prevent a modal shift to the use of trucking, in the eastern half of agricultural Manitoba. A fully rationalized elevator system could have an average unit operating cost some 25% (or more) lower than it is currently. This would entail a dramatic reduction in the number of elevators and delivery points serving producers. This may not occur as rapidly as necessary

to prevent temporary, and inefficient, modal shifts without the relevant regulatory and institutional factors being reviewed prior to any the change in the method of payment.

WGTA distance related rates (non-cost based) would subsidize high cost lines at the expense of low cost lines. If commercial rates were adopted, the rail companies must be allowed to become more competitive or the freight volume would be lost to trucks. Branch lines that are more costly to operate than trucks would no longer be used by farmers or they would be sold to short line rail companies. Manitoba has relatively few branch lines at risk of abandonment compared to the rest of the prairies.

If a change in the method of payment occurs, alternatives to the current system could be encouraged to develop competition and lower costs, e.g. a bulk trucking industry, short line rail operations, high capacity producer car loading facilities, facilities for cleaning export canola in Manitoba, etc.

Infrastructure and Handling Impact Analysis

Even without any change in the method of payment, over the longer term the elevator system and rail system will continue to rationalize under the status quo scenario. Under the status quo, i.e. payment of the Crow benefit to the railways, adjustment could include:

- abandonment of the Rossburn, Cowan, Winnipegosis, Lyleton subs, Gretna sub, Carman spur, and the Russell sub from Inglis to Russell, and the Winnipeg Beach sub from Selkirk to Riverton,

- continued reduction in delivery points from 195 to 105 or less, further reduction in elevators from the current level of 272 down to 134 or less,

- the time period for these changes of 10 to 15 years.

These changes are probable, even with no change in the method of payment.

Changes attributable to changing the method of payment, by adopting a WGTA Total Rates scenario under a pay the producer system with no change to CWB pooling, could include:

- increased potential for abandonment of Arborg sub, Carman sub, and the Miami/Hartney sub west of Morris.

- reduction of exports of barley by 500,000t with loss of an additional 15 to 20 elevators.

These changes would be additional to those described above as occurring even with the status quo.

A commercial rate structure would speed up the rate of both elevator rationalization and rail system rationalization and the construction of new high throughput facilities. The loss of "on line" commercial storage capacity might require the development of an on-farm inventory information system and expansion of delivery contracts and other techniques to secure timely delivery of board grains.

The impact on the road system of adopting commercial freight rates on the road system would be:

- shifting forward in time the elevator and rail rationalization process from what it would otherwise be.
- changes in direction of truck traffic resulting in traffic being shifted to roads other than those currently being used to handle the volume.
- production shifts yielding a major increase in trucking of barley to local consumption especially in the south central region.

The extent of impacts indicates that change must be well planned and must have time to occur in an orderly manner. Thus a series of scheduled changes over a period of say 5 years, may be required.

Analysis of Impact on Provincial and Municipal Roads

Methods exist to estimate the impact on paved roads. Non-paved roads will also suffer additional maintenance costs - at least partly attributable to the preponderance of high silt content soils - relative to other parts of the prairies.

The traffic inspection program needs to be expanded to better prevent the damage to both provincial and municipal roads that occurs due to overloaded grain trucks delivering to elevators during periods of road restrictions.

The impact of a change in the method of payment on the truck traffic in the province and on the maintenance and construction costs for provincial and municipal roads, means that the highways department should play a major role in the comparison of payment alternatives prior to decisions being taken. A road impact assessment should also be made a mandatory part of the analysis required prior to the abandonment of any branch line. Consideration should be given to compensating the two levels of government affected for the increased capital and operating cost they will face as a result of a change in the method of payment.

EXECUTIVE SUMMARY - SECTION III

This analysis of the possible implications for rural communities of a change in the method of payment of the Crow benefit was carried out largely on the basis of information provided by other phases of the study. This information included analyses of production shifts, changes in the processing sector, and the transportation and handling sector including anticipated railway and trucking impacts.

Many studies have been carried out on the economic impacts of railway and elevator rationalization but minimum attention has been focused on the social impacts of such consolidation. There is little doubt that the removal of railways and grain elevators have a detrimental impact on some rural communities. However, the perception that the closing of these services automatically spells the demise of affected centres does not appear to be valid. Such removal is but one factor among a host of factors which adversely affect rural community viability.

It must be pointed out that the nature of rural communities is changing. As the various elements of assumed community viability wane the concept of what constitutes the community changes to encompass a larger geographic area providing the services formerly associated with the "hometown." This new community concept has evolved because of improved roads, better vehicles and improved communication. Railways, or lack thereof, have little impact on this community and elevators are now located beyond the town and village limits where 20-40 railway car spots can be accommodated.

Several communities which have lost rail and elevator service over the past decade or more have prospered.

Other studies state that to be economically viable now, an elevator must have an annual handle of a minimum of 25,000 tonnes. This means that there will be a great deal of elevator rationalization with or without a change in the method of payment.

The effect of abandonment on some elements of the rural community do carry a cost. One of the most often stated additional costs referred to is that of roads due to additional trucking. This is one item cited to express the feeling that so-called "system savings" produced through abandonment are really cost transfers from one level to another. This is probably true to some extent and justifies the call for municipal assistance from "system savings" to offset these local costs. Some studies indicated, however, that these costs have at times been overstated.

While the current Federal Government policy does not include expenditures on intra-provincial roads, the RMs have expectations that senior governments would assist with these increased road costs. Given the Federal Government policy, it would appear increased pressures would then occur on the province.

The basis of change in the method of payment of the Crow benefit could have more implication for the rural community than just railway and elevator abandonment. Should the payment be made in a lump sum in the form of a negotiable bond then the community impacts would naturally be quite different than annualized payments.

Other sections of the report have indicated that commercial trucking can economically replace much of the branch line grain haul with very minimal damage to provincial trunk highways. If this is the case this will probably open business opportunities in rural Manitoba which don't currently exist. However, damage to municipal roads and P.R. roads which are not constructed to P.T.H. standards could be significant.

The increase in livestock production would provide more local employment in feed preparation, cleaning operation, livestock equipment supplies and farm work than would be the case under straight grain production.

A switch from grain production to cattle production is a lengthy process and the economic stresses of the transition will depend on whether the current cattle producers increase their production and absorb smaller farms as is anticipated or whether individuals opt for a switch in production. In the long term the change is viewed to be positive in terms of improved community viability. This is due not only to the extra off-farm jobs created but the year-round nature of the livestock operation which retains people in the community.

The overall impact of railway and elevator rationalization will vary from subdivision to subdivision and community to community. An attempt has been made to indicate the demographic, geographic and economic factors which influence the degree of impact but there are no known criteria for determining which communities will falter and which will survive, just as some individuals with equal financial and physical resources fail and some will prosper.

As is pointed out the report of The Grain Handling and Transportation Commission (Hall Commission), "*... it has become evident that community viability can only be perceived, it cannot be defined. It is the people and the spirit of the people which gives the community viability not the railways and elevators.*"

EXECUTIVE SUMMARY - SECTION IV

A change in the Canadian Wheat Board pooling is an issue separate from the method of payment question. The impetus for such a change would come from producers or the Canadian Wheat Board itself and not directly from the federal government. As such, the implementation and decision involving a change in pooling would likely be independent from those involving the method of payment. Not only would the Board pooling likely be revised as a separate event from a change in the method of payment, but the former is a policy issue while the latter is primarily a transportation problem. While it is a separate decision, a revision to pooling must be dealt with at the same time as the method of payment issue.

As markets and marine transportation have evolved, the export position for eastern shipments has shifted from the traditional location at Thunder Bay to the current position on the St. Lawrence River, predominantly Montreal.

If 60 percent of exports in a CWB pool move through the west coast the revision of the CWB pooling locations to Vancouver/St. Lawrence from Vancouver/Thunder Bay, could increase Manitoba grain farmers' freight costs by a net of $12.67 per tonne.

This is a dramatic effect compared to a change in the method of payment, where the increased charge for freight would be offset by a Crow benefit payment.

While such a revision would create a strong incentive for livestock feeding to occur in Manitoba, the adverse impact on grain producers would be significant.

If the Crow benefit payment to producers was to be implemented, it should be distributed on the basis of total freight charges which Manitoba producers may face, not just on rail freight costs. Manitoba farmers should not face the full unsubsidized costs of the seaway while other western grain farmers receive the Crow benefit on all their transportation costs. Also, it is in the interests of the producers in western Canada to utilize eastern export capacity as the west coast cannot handle all exports.

SECTION I

Analysis of the Impact of a Change in The Method of Payment of the Crow Benefit on the Processing Sector in Manitoba

1.0 INTRODUCTION

A change in the method of payment of the Crow benefit would impact individual farmers in Manitoba and western Canada, in terms of the freight rates charged for transporting grain and the amount and method of the payment to producers. However, the range of impacts is far more pervasive than just the direct impacts.

An increase in rail transportation costs paid by western Canadian grain producers has potential to restructure the agriculture industry in Manitoba as well as in the other prairie provinces. While the Crow benefit payment to producers would , on average, offset the extra freight, the impact of increased freight rates would fall unevenly on the prices received for various crops, thereby creating an incentive for farmers to alter their current production patterns. These lower grain prices would reduce production costs in those processing sectors that use these commodities as inputs. Before the repercussions of such changes could be determined for secondary processing industries, the initial "production shifts" at the primary level were first analyzed. Using the findings on production shifts and price changes from that report, this study identifies impacts on the processing sector in Manitoba, in terms of the changes in production, expansion or contraction of the sector, and economic impacts which would result from a change in the method of payment.

2.0 TERMS OF REFERENCE AND METHODOLOGY

This report addresses the changes in the types and volumes of secondary processing which would occur as a result of changes in freight costs paid by the producer due to introducing the pay the producer method of payment. The processing industry in Manitoba is defined as the manufactured livestock feed and the food and beverage processing sectors. More specifically, this study considers each of the following:

- Livestock slaughter and processing
- Feed mills
- Oilseed crushing
- Specialty processing such as vegetables, peas.
- Flour and semolina production
- Starch and gluten production
- Forage and seed, dehydrated alfalfa
- Beverages (malt and breweries), and
- Ethanol

Each industry is examined to determine the likely direction and magnitude of change expected to occur as a result of a change in the method of payment, with particular emphasis on livestock processing and oilseed crushing. The various industries are analyzed as to the following:

- volume and value of output,
- market opportunities and constraints,
- existing capacities,
- future capacities, and
- current employment levels;

and under the two policy options developed:

i) Western Grain Transportation Act (WGTA) Total Rates: change to pay the producer; no change to Canadian Wheat Board pooling; and full WGTA rates charged to the producer, i.e. the producer would pay both the current share of such rates as well as what is presently being paid by the government. This scenario assumes no rationalization in the rail system.

ii) WGTA Eliminated: change to pay the producer; Canadian Wheat Board pooling unchanged (Thunder Bay/Vancouver); Western Grain Transportation Act eliminated and the National Transportation Act revised so that is applies to crops and their products. This scenario would have commercial rates apply to statutory crops.

Specifically, the methodology used in this phase of the study involved the following steps:

i) Review relevant literature and studies.

ii) Identify and describe the existing processing industry by sector.

iii) Formulate likely scenarios under each of the policy options described above.

iv) Test scenarios with knowledgeable participants in the Manitoba processing industry sectors identified.

v) Analyze resulting information and opinions.

vi) Present findings and conclusions.

This report has been organized into sections which closely parallel these steps in conducting our research.

3.0 LITERATURE REVIEW

The review of past studies involved an examination and identification of those industries that might be affected by a change in the method of payment and the factors that might provide the impetus. While much research has been undertaken to analyze impacts at the primary level, few studies go as far as analyzing the impact on the processing sector. Little work has been done in processing alone, notwithstanding the effects that changing the Crow/WGTA would have on processing. The little that has been done is at the market level, rather than from a micro-level perspective, as is the case with this study. Nonetheless, these studies do provide necessary background and direction for the analysis.

4.0 IMPACT ANALYSIS

For the purposes of this study, the agricultural processing sector can be defined as those firms that process or refine raw agricultural commodities for use as an intermediate input in the food chain (e.g. livestock feed) or for final human consumption. This sector, comprised of 182 firms, accounts for approximately 33 percent of total shipments and 19 percent of employment in Manitoba.

The major processing industries which would likely be affected by a change in the method of payment are livestock slaughter and processing and oilseed crushing. Supply managed commodities such as poultry, eggs, and milk will not be significantly directly impacted, and, therefore, are not included in the analysis.

There are three ways in which a change in the method of payment could directly impact the processing sector:

- a change in raw input costs,
- a change in supply of raw inputs, or
- a change in freight costs on products (outputs)

These factors will affect industries to varying degrees and will depend on which of the two scenarios is analyzed. For instance, the change in raw input costs (e.g., price of canola seed) has potential to significantly benefit the canola processing industry. Conversely, the change in raw input costs (price of slaughter cattle) is expected to be less affected by a change in the method of payment and, therefore, less of a benefit to the meat processing industry. Still, livestock processors are expected to gain from increases in supply; for canola crushers, this is expected to be less of a factor. Therefore, industries are expected to respond differently to the same scenario.

4.1 Expected Impact of a Change in the Method of Payment

If farmers were to directly pay a greater share of the real railway costs of transporting grain, production shifts would likely occur at the primary agricultural level[1]. These shifts would occur even though the producer might receive a Crow benefit payment which fully offsets the higher freight costs.

The production shifts would result from the effect of increased transport costs on farmgate grain prices in Manitoba. Prices would invariably fall for all grains, but the percentage by which they do so depends upon the unit value of the crop and the amount of freight rate increase that the market absorbs.

As the commodity prices change, so would planned production for these commodities. Such shifts in production and changes in prices at the primary level are expected to have the following implications for secondary processing:

i) Industries either processing any of these commodities or using them as an input into the final product would benefit from lower prices.

ii) The characteristics of many agricultural commodities are such that processing plants tend to locate near the supply of the raw material. That decision and investment being made, these plants require a stable and sufficient supply of the primary input in order that production can be maintained, utilizing the full capacity of the plant.

iii) Production shifts at the primary level would also benefit those industries that provide an input into this process. For example, if livestock feeding were to expand, the potential market for canola meal would also increase.

[1] For supporting detail and a complete explanation, see Deloitte Haskins & Sells, Analysis of Production Shifts, Discussion Paper #2, Section II, December 1989.

An increase in economic activity that would be caused by a change in the method of payment has a direct, indirect, and induced impact. The direct impact would occur in the industry in which production increases. For example, if lower priced canola seed led to increased canola processing, the economic activity - i.e., the value-added component, employment, etc. - related to change constitutes the "direct impact."

In a regional economy, the total economic impact related to some increase in economic activity is greater than just the direct impact. "Induced" impacts occur from employee respending, and "indirect" impacts result from the increase in economic activity of those businesses supplying the direct impact. Together, these components constitute the "total" impact which can be expressed as a single multiplier number.

These multipliers can be derived by several methods, but the most common is by the Statistics Canada Inter-Provincial Input-Output Model. It would be desirable to employ these multipliers in this analysis, but for reasons of confidentiality, they are not publicly available at the level of detail required by this study. Still, by comparing the multiplier values for the food and beverage industries with those of other industries, the impact occurring from a change in the method of payment can be more easily appreciated.

Table 4.1-1 Manitoba Industry Multipliers

Industry	Total Employment per Direct Job	Total GDP (Factor Cost) Per Dollar of Direct GDP
Agriculture	1.396	1.620
Forestry	1.424	2.006
Fishing, hunting & trapping	2.371	1.415
Metal mines	1.896	1.399
Mineral fuels	6.004	1.557
Non-Metal Mines & quarries	1.772	1.644
Services incidental to mining	1.583	1.633
Food & beverage	***2.509***	***2.674***
Tobacco	0.000	0.000
Rubber & plastics	1.715	1.705
Leather	1.609	2.020
Textile	1.432	1.558
Knitting	1.529	1.595
Clothing	1.382	1.611
Wood	1.883	1.987
Furniture	1.521	1.683
Paper	2.432	1.910
Printing	1.767	2.041
Primary metal	3.120	2.839
Metal fabricating	1.740	1.737
Machinery	1.649	1.828
Trans. equip.	1.491	1.725
Electrical products	1.657	1.722
Non-metal. mineral	1.916	1.754
Petroleum & coal	3.451	0.424
Chemical	2.317	2.139
Misc. Manuftg.	1.582	2.106
Construction	1.779	1.940
Transp. & storage	1.939	1.733
Communication	1.602	1.608
Elec, power, gas, & other utilities	1.494	1.183
Wholesale trade	1.607	1.658
Retail trade	1.351	1.721
Owner-occup dwgs	4.748	1.234
Finance, insurance, & real estate	1.790	1.616
Educ & health	2.340	1.727
Amusement & rec.	1.513	1.803
Services to bus.	1.350	1.665
Accom & food	1.389	1.823
Other pers & misc.	1.131	1.644

Source: Manitoba Bureau of Statistics
Statistics Canada 1979 Input-Output Model

From this table, it is apparent that the food and beverage industry has a substantial multiplier effect, relative to other industries. This high multiplier reflects the significant local value-added component characterized by this industry.

The multiplier effect is best interpreted with an example. The total contribution to Gross Domestic Product for a $1 million direct contribution of GDP would be $2.674 million. Likewise, if direct employment were to increase by 30 jobs, the total employment impact would be 75 jobs.

These general comments on the impact of a change in the method of payment are now followed by a review of each sector.

4.2 The Livestock Processing Industry

4.2.1 Beef/Cattle

In the production shift analysis, livestock supply was shown to increase under each of the specified scenarios. That is, if feedgrain costs decline, cattle and hog production are expected to increase. But the beef slaughter and processing industry would only benefit to the extent that the "intermediate processing" occurring between calf production and slaughter - i.e, feeding operations - expands. However, the number of animals fed in the province is presently affected by factors other than the number of calves produced, such as feedgrain assistance programs in Alberta and Saskatchewan and the impact of tripartite beef stabilization programs, in Manitoba relative to the other provinces where such programs exist.

Current Situation

Cattle marketings in Manitoba have ranged from a low of 311,000 head in 1981 to a high of 408,000 in 1980, with the peak in recent years at 394,100 in 1986. Production was relatively flat during the next two years, levelling off to 380,000 by 1988.

As shown in Table 4.2.1-1 below, prior to 1984, the number of feeder animals sold inter-provincially and to the U.S. was relatively constant between 35,000 and 65,000 head per year, with a large proportion going to Ontario. In 1984, volumes of interprovincial feeder cattle sales, not including sales to the U.S., increased to 119,800 head and to a high of 204,000 head by 1988. A noticeable shift in movement of feeder cattle to the prairie provinces west of Manitoba began in 1984, increasing from 50,000 head in 1986 to 113,225 in 1988.

Table 4.2.1-1 Cattle Industry Profile

		Manitoba-Origin Feeder Cattle Fed In		Slaughtered in MB		Manitoba Origin Slaughters		
	Production	AB/SK/ON	US	Total	SK %	AB/SK	US	ON
1979	391,000	n/a	37,090	n/a	n/a	n/a	n/a	
1980	408,000	n/a	44,841	270,592				
1981	311,000	n/a	33,385	260,593				
1982	322,000	n/a	63,844	272,205				
1983	342,000	n/a	4,376	262,627			26,401	
1984	368,300	119,800	45,400	259,853		n/a	n/a	
1985	393,300	74,580	8,480	287,536			39,550	
1986	394,100	165,150[1]	0	380,900	26%	0	15,700	4,200
1987	380,300	184,410[2]	800	241,554	23%	0	25,900	13,800
1988	380,000	204,000[3]	11,790	183,000	25%	11,280	64,030	0

Source: Manitoba Agricultural Yearbooks, Livestock Production, 1979-88
Note: 1. 50,000 to Alberta/Saskatchewan, 115,150 to Ontario
2. 60,000 to Alberta, 30,000 to Saskatchewan, 94,410 to Ontario
3. 113,225 to Alberta/Saskatchewan, 90,775 to Ontario

This trend can be attributed in part to the introduction of provincial government feedgrain assistance programs in Saskatchewan and Alberta. The "Crow Benefit Offset Program" (ACBOP) provides Alberta's livestock producers with a payment on each tonne of grain fed to cattle and other commercially fed livestock. Currently $10.00 per tonne, this subsidy was much higher ($21.00) when first introduced.

Saskatchewan's "Feedgrain Adjustment Program," pays thirteen dollars per tonne of feedgrain, based on a standard consumption factor for cattle, hogs, and other specified animals finished in that province. Prior to this program, Saskatchewan livestock producers received a tax credit that had a similar effect.

The resulting impact of animals leaving the province to be fed out has been twofold: i) a sharp decline in the number and condition of feedlot operations in Manitoba, and ii) a decline in the processing industry. As shown in Table 4.2.1-1 above, the number of animals slaughtered in Manitoba decreased from a 1980-1985 average of 268,000 to 183,000 in 1988, culminating in recent plant closures. While calf production remains relatively stable, slaughter numbers are rapidly declining. As a result, an increasing proportion of slaughter animals, currently around 25%, have been imported from Saskatchewan. It has been suggested that the feeder cattle being exported to Saskatchewan and Alberta are the choice animals, leaving Manitoba processors with a stock that may not yield consistent quality and size of cuts. This may affect Manitoba's ability to delivery high quality product to its existing markets.

Impact Analysis

As shown in the study analyzing production shifts, the effect of lower feed grain prices would be an increase in livestock production in Manitoba in the long run, estimated to be 58 thousand head.

A second possible increase in cattle finished in Manitoba would be from those animals presently exported to Alberta and Saskatchewan for feeding. The change in the method of payment could prompt feedgrain assistance programs in those provinces to be dismantled. The program in Alberta was specifically instituted to offset high feedgrain costs to livestock producers caused by the current method of payment and subsidized freight rates; on the other hand, the program in Saskatchewan was initiated so that its livestock sector could compete with Alberta. Therefore, it is believed that a change in the method of payment could initiate fiscal and political pressures that would cause these governments to terminate such programs. Alberta has already stated that it will discontinue its program if the pay the producer program is implemented.

The effect of these programs has been to attract feeder cattle from Manitoba, leaving less available for Manitoba processors. Manitoba has also just initiated a similar program. Therefore, a "level playing field" will be achieved, if not by the effects of the feedgrain assistance program, then by the pressures asserted by a change in the method of payment to have these programs dismantled. The analysis proceeds under this assumption.

If these programs were discontinued, the incentive would not be as great for feeder cattle to be exported from Manitoba, and a greater percentage would remain in Manitoba and subsequently be available for local processing. As shown in Table 4.2.1-1, in the past year there were 113 thousand head of feeder cattle exported to Alberta and Saskatchewan from Manitoba. Therefore, the potential long run increase in production and feeding could amount to a total number of cattle fed in Manitoba of approximately 293 thousand under the WGTA Total Rate scenario.[2]

An increase in the number of cattle fed to finish in Manitoba should provide an opportunity for a significant increase in the number processed in the province. However, this relationship has been challenged by some knowledgeable participants in the beef industry for the following reasons:

i) The cost of reopening Manitoba feedlot operations shut down in the last one to six years or increasing existing small-capacity operations may be too great to encourage entry into the feeding sector. Still, if incentives exist to feed livestock in Manitoba, such costs may present a delay, but not a barrier to entry in the long run.

ii) Expansion of Alberta's feedlot industry has occurred to the extent that many feedlot operations in southern Alberta have substantially increased their capacity, illustrating the commitment that the industry and government in that province has in developing its livestock sector.

iii) Alberta has more of an "entrepreneurial ideology" than Manitoba at the present, characterized by the resurgence of the feedlot sector in

[2]For supporting detail, see: Deloitte Haskins & Sells Analysis of Production Shifts, Discussion Paper #2, December, 1989.

Alberta and an attitude and intention to "out-compete" for feeder cattle, including government subsidies to support expansion.

iv) Other provinces, especially Alberta, may not be prepared to allow Manitoba's competitive advantage to create the largest percentage increase in beef production in this province, and may reinstate some type of subsidy to offset Manitoba's natural advantage.

Still, it is expected that with a change to pay the producer, cattle production will expand in the long run, creating an incentive to expand the feedlot industry. This in turn could have an impact on the processing sector.

A change in the method of payment would not likely cause a significant change in the price of slaughter cattle (raw material for the processing industry) in Manitoba. Although the price of cattle is one of the critical factors influencing the number of cattle slaughtered and processed in Manitoba, any change in prices is expected to be negligible.

Canadian cattle prices are set within the floor and ceiling of prevailing U.S. prices, and western Canada livestock production represents only 0.93 percent of North American cattle production, not enough to significantly influence prices. The increase in production will be restricted to the prairie provinces, as other areas are not impacted.

The increase in production (after the assumed retention of feeder cattle presently shipped to Alberta and Saskatchewan), is estimated as 24 percent. This increase is shown in Table 4.2.1-2. The market share of the North American market for western Canadian beef would still be less than one and one quarter of one percent.

Table 4.2.1-2 Capacity of Cattle Processing Industry: Current vs. Required

Cattle	P.T.P. WGTA	WGTA Elim.
New # fed (existing & Alberta & Sask)	234,235	<234,235
Increased production resulting from feedgrain prices (using 50% absorption)	57,622	57,622
New Expected Total # Fed (MB)	291,856	<291,856
Assumption: We will slaughter 100% of fed animals		
1988 Slaughter capacity (approximately)	241,800	241,800
Excess of slaughter animals	50,056	<50,056

Processing

The beef processing industry in Manitoba consists of four main participants with an estimated combined "kill" capacity of 4,650 head/week. Actual plant capacity is difficult to determine because processing is constrained by refrigeration or "chill" capacity. Before the carcass can be cut, it must be chilled, limiting plant capacity to the refrigeration capacity. On the other hand, multi-specied plants can be converted into specialized plants with little additional capital investment.

Nonetheless, with an average kill of 2,650 head/week in 1989, it is apparent that the industry is operating with substantial excess capacity. Thus, the estimated increases in slaughter cattle production could easily be accommodated by the Manitoba beef industry.

In recent years, the supply of Manitoba origin slaughter cattle has declined. There are two main reasons for this phenomenon:

(i) Even though Manitoba processors have capacity, an increasing number of these cattle are being transported out of the province for slaughter, especially to the U.S. A market has developed in the U.S. for Manitoba slaughter cattle, where the animals are slaughtered and then cut according to specifications for that market. U.S. exports have increased from almost 16,000 head in 1986 to over 64,000 in 1988.

(ii) Manitoba has lost feeder calves to Alberta and Saskatchewan, leaving local processors with less product. In fact, feeders have been exported to be fed in Saskatchewan, only to be returned and slaughtered in Manitoba.

While calves are being lost to Alberta and Saskatchewan, slaughter cattle are not. There are currently only about 11,000 head of slaughter cattle moving to Alberta and Saskatchewan.

The large plants in Alberta and Saskatchewan do have some potential to bid slaughter cattle away from Manitoba, but this is not occurring at present. There are four different plants each having a capacity of 6,000 head/week (single shift). These plants have larger economies of sale and, therefore, potentially lower unit operating costs than in Manitoba. At the margin, if the difference in operating costs between Alberta and Manitoba were greater than the cost of transporting slaughter animals from Manitoba to Alberta, there would be an economic incentive for Manitoba origin cattle to be shipped to Alberta for slaughter. However, transporting cattle this distance not only incurs freight costs but also creates weight losses (shrink) and potentially affects the quality of the meat.

It is reasonable to expect that, following a change in the method of payment, the province's processors would benefit. However, the extent to which they do so depends upon their processed products finding a market. Currently, Manitoba's processing is essentially dedicated to the local market. The domestic market will grow only to the extent that the population does.

The large plants in Alberta have been positioned, in part, for the Pacific Rim. In the short term, this market is not yet well developed, leaving the supply in North America, and creating more competition than there would be otherwise.

The Ontario market probably represents the greatest market opportunity for Manitoba processors. Ontario's beef industry is characterized by small, high cost packing plants, and there is expected to be some "fall out" in this province's industry. The economics favour Manitoba in not only processing beef, but also raising cattle. Therefore, with backhauls from this market, processing boxed beef into Ontario from Manitoba could become an efficient and attractive alternative.

Assuming that the stock of slaughter cattle were to develop in Manitoba, processing in this province would have cost advantages over Alberta in not having to incur freight costs on live cattle as high as those in Alberta and lower freight cost on meat shipped to the eastern and local markets.

The beef industry has undergone a great transformation in the U.S. and the same phenomenon is occurring in Canada. This trend is toward specialized, high volume, low margin plants. Thus, the potential exists for such a plant to be established in the longer run.

Whether new plant investment is attracted to this province depends on the following factors:

(i) the ability of the province to "hold on" to its cattle, creating sufficient volume to consistently supply a large plant, and

(ii) the confidence that the processor/investor has that there will be a stable and sufficient supply of cattle.

In the interim, there is potential for specialization and new investment in existing plants. But in the long run, there appears to be opportunity for a single, large processor, which could cause some rationalization.

Manitoba processors should benefit from a change in the method of payment, but the extent to which they do so depends on a resurgence in livestock production and feeding patterns. Therefore, new plant investment would depend not so much on the absolute increases in slaughter cattle production, as on historical levels of production being restored. A change in the method of payment would do this, encouraging feeding within the province and providing the impetus for all the prairie provinces to dismantle their feedgrain assistance programs.

The extent to which livestock production expands depends on the scenario that is being examined.

Under the WGTA Eliminated scenario, the producer would pay commercial freight rates, expected to be less, on average, than the present WGTA rates. The change to the producer would be a smaller increase in freight costs than expected under the WGTA Total Rate scenario. The decrease in feed prices would cause an increase in livestock production, but to a lesser extent than under the WGTA Total Rates scenario.

While the overall impact of commercial rates on Manitoba would be similar to the impact under WGTA Total Rates, locations would be impacted unequally depending on their position relative to the transportation system. For instance, mainline locations would see a smaller change in grain prices, but branch lines would be paying significantly increased freight rates, and thus see the greatest impact on feedgrain prices. This would create localized incentives for expanded livestock production. However, these animals would be shipped to centralized slaughtering facilities. Thus, the impact on livestock processing would be similar to that identified under the WGTA Total Rate scenario, but due to the reduced production impact, the impact on the livestock processing sector would be somewhat less than under the WGTA Total Rates Scenario (e.g. something less than the increase of 58 thousand).

Whatever the scenario, new plant investment is not likely to occur unless investors have confidence that the supply of Manitoba origin slaughter animals will remain sufficient to operate a new plant at satisfactory levels.

If a change in the method of payment were to restore such confidence, it would provide the impetus for investment.

4.2.2 Hogs

Current Situation

As shown in Table 4.2.2.1 below, the hog industry in Manitoba has nearly doubled in ten years, with production increasing from 1,000,000 in 1978 to 1,913,300 in 1987 and slaughters from 1,166,800 in 1981 to 1,777,000 in 1988. Manitoba has generally been increasing from 9 percent to 12 percent, of Canadian production and slaughters from 1978 to 1988 (see

Appendix 1), and is a net exporting province, exporting 78 percent of hogs and pork to destinations out of the province.

Manitoba is characterized by certain competitive advantages that have enabled its hog producers to become "low cost producers". For example, the following has enabled Manitoba hog producers to achieve this advantage:

- efficient barn builders,
- barns that do not have to be heated as they do for chickens, therefore, not disadvantaging Manitoba producers,
- preferred premium product, (i.e. barley feed, low fat)
- specialized production,
- good breeding stock,
- large economics of scale, and
- cultural factors.

These advantages have enabled hog producers to sustain a constant expansion since the early 1970's, despite government incentives in other provinces and any adverse effect that the current method of payment may have had.

The processing industry consists of five main plants with capacities ranging from 2,000 head/week to 17,500 head/week, and a total weekly capacity of about 47,000 head. It has been suggested that for existing plants to continue slaughtering at current numbers, Manitoba-origin hog marketings will not be sufficient, requiring outside products to be purchased and cut by Manitoba processors.

Table 4.2.2.1 HOG PROFILE

	Production	Marketing	MB origin Slaughter	Local Slaughters
1978	1,000,000	895,000	n/a	40,000
1979	1,225,000	1,084,012	n/a	36,000
1980	1,256,000	1,250,000	n/a	30,000
1981	1,234,000	1,220,000	1,166,808	23,000
1982	1,253,900	1,229,000	1,130,686	24,000
1983	1,451,000	1,358,000	1,222,855	20,000
1984	1,648,800	1,583,000	1,238,985	26,000
1985	1,742,000	1,777,000	1,492,999	20,000
1986	1,805,200	1,743,000	1,555,301	21,000
1987	1,913,300	1,825,300	1,640,102	21,000

Two plants in Manitoba are multi-species facilities (hogs and cattle), suggesting that some specialization may take place as opportunities for either beef expansion or hog expansion may be more attractive for one than the other. Already, the trend in the industry is a shift away from the traditional multi-species processing plants as economies in refrigeration, packaging, and transportation favour specialization. Competitiveness will be based on the ability to construct or modify existing plants to single species, one floor, linear (as opposed to vertical) processing plants near hog supplies in order to process pork on a scale competitive with major U.S. firms.

At the processor level, market access is constrained by a number of factors such as tariff and non-tariff barriers. Recently, a countervailing action was placed against Canada by the U.S., which was found in favour of the U.S.; that is, Canadian programs were found to constitute production subsidies and Canadian pork imports hurt U.S. domestic sales. This reduced return from exports will have a direct impact on producers and processors, and may

adversely affect future expansion in livestock production. However, the impact of the change in the method of payment is a separate influence and the impact estimated in the following section can be expected regardless of other more general trends occurring in the industry. Because an expansion due to a change in method of payment would be induced by the market and not production subsidies, it should not be subject to additional countervailing duties.

Impact Analysis

Feedgrain accounts for about 60 percent of the cost of producing a hog; thus, the availability of competitively priced feeds is a key element in a competitive pork industry. As shown in the analysis of production shifts, with a change in the method of payment and a decrease in the price of feed grains, hog production is likely to expand, estimated at 525 thousand head in the long run depending on the scenario examined. Under the WGTA Total Rate scenario, this expansion would bring the total level of expected production to 2,343 thousand head. It should be noted, as is true for all estimates of future levels under each scenario and each product sector, the numbers are approximations.

As processing levels in the past have been close to hog production, it is assumed that this would continue and that the projected production volume would equal projected processing volume. The existing capacity in Manitoba processing plants is 47,000 head/week or 2,444,000 annually.

The increase could be accommodated by existing plant investment or by specialization in the existing operations.

Any plant investment in hog processing in Manitoba is significant because of its relatively high multiplier effect. That is, the economic activity related

to the transportation, slaughter, and further processing of pork processing is much higher than for beef processing. Therefore, any increase in pork processing has an impact for not only the industry itself, but also the economy as a whole.

4.3 Feed Mills

The feed industry includes operations which manufacture complete feeds, feed supplements and premixed feeds. Raw inputs to the feed manufacturing sector include feedgrains such as barley, protein meal (canola) and some by-products from the meat packing industry.

Feed grains comprise over half of the content of complete feed which is used for hogs, poultry and dairy cattle. As noted in the hog processing sector above, feed accounts for roughly 60 percent of the cash costs of producing hogs. Therefore, a change in the price of inputs such as the price of canola, and its impact on the canola processing industry; barley and other feedgrains; and change in volume of cattle production, along with a possible impact on the beef processing sector, can all potentially have an impact on the feed manufacturing industry in Manitoba.

The majority of the major feed mills which provide a full range of products are located in Winnipeg and south eastern Manitoba with many of the secondary and premix retail/packaging operations situated in other areas of rural Manitoba. The increase in services offered in rural plants has increased the level of competition with plants in Winnipeg, resulting in most plants operating at less than full capacity. These plants serve mainly the local markets.

If the prices of feedgrains and canola fall substantially, this will impact positively on the feed manufacturing industry, whose costs for raw inputs will decrease and demand from expanding livestock sector will increase.

4.4 Canola

The western Canadian grain economy is primarily based on cereal seed production, the bulk of which is exported in raw form or fed to livestock. Several crops, the most notable being canola, offer some potential to diversify from this cereal orientation. But no major crop other than canola has induced significant industrial and economic diversification in western Canada.

The impact that a change in the method of payment would have on the canola processing industry is difficult to assess independent of other developments in the industry. Lower prices for raw seed would obviously reduce input costs, and increased livestock production would potentially expand the local market for meal. But the degree to which processors are able to take advantage of such opportunities depends on a number of variables. Therefore, to appreciate the extent of its implications, a change in the method of payment must be viewed within the context of the current state and future prospects of the industry.

Current Situation

(i) **Industry profile:** Of the nine oilseed processing plants in Canada that have the capability to crush canola, seven are located in the prairie provinces and another two in eastern Canada.

In western Canada, with the exception of a small amount of sunflower seed processed in Manitoba, the only oilseed that is processed is canola. In Ontario, where crushers had traditionally processed soybeans, the situation has changed considerably. While soybeans are still processed more than any other oilseed, two of the three existing oilseed plants now have the capability to process canola as well.

Manitoba has two oilseed crushing plants, one in Altona and the other in Harrowby, both owned by CSP Foods Ltd. Of the two plants, the one in Harrowby is more modern, but does not have refining capability. On the other hand, the Altona plant has the capability to produce high quality salad and cooking oils margarine, and shortenings. Both plants are rated at a capacity of 600 mt./day.

The western Canadian canola industry normally employs 530 people. During 1988/89, when 45 percent of the western Canadian industry was shut down because of negative crush margins, approximately 140 plant jobs were lost. CSP Foods employs about 140 people in its Manitoba oilseed operations, half of which were affected by layoffs during the past year.

Virtually all Canadian grown canola, except for some very small amounts in Ontario and British Columbia, is produced in the prairie provinces. Before canola production would be an attractive alternative to corn or soybeans in Ontario, winter canola would have to become a more viable option. Thus, canola will probably continue to be grown primarily in the prairies for the foreseeable future.

(ii) **Supply and demand of Canadian grown canola:** Canadian processors are concerned with securing a stable and sufficient domestic supply of raw canola seed to efficiently utilize their plant capacities.

The production shift analysis indicated that canola production would increase under most scenarios, but the extent to which this would benefit processors depends on a number of factors.

For 1989/90, Canadian production of canola has been estimated at 3.5 million tonnes, down from the record high 4.2 million tonnes harvested last fall. Manitoba's canola production for 1989/90 is estimated at 463.0

thousand tonnes, or 13 percent of the total, somewhat lower than its ten year average of 488.5 thousand tonnes.

Canadian crushers process approximately 40 percent of canola produced domestically, two thirds in western Canada and the rest in the east. In 1988/89, domestic processors purchased 1.374 million tonnes of canola, down by 229 thousand tonnes from the previous year. During the last year, the two Manitoba plants had a total throughput of 346 thousand tonnes of canola seed. The Altona and Harrowby plants receive the majority of their seed from Manitoba, but must also draw from Saskatchewan.

Despite a record harvest in 1988, canola processors had difficulty in securing an adequate supply of seed. Processors claim that Canadian farmers, who carried 1.1 million tonnes of canola into the current year, withheld deliveries in expectation of higher future prices. For western Canadian crushers, this price speculation has increased the cost of raw canola seed relative to the market price that can be obtained for the processed products. Although there was an abundant supply of canola in the system, processors could not secure enough at such prices that enabled them to operate profitably.

The implication to this study is that although the production shift analysis indicated that Manitoba canola production would increase by approximately 3 percent, this by itself does not insure that the processing industry will benefit. The domestic supply must not only be sufficient, but also at such prices that enable processors to operate with positive crush margins. As such, western Canadian canola crushers must compete on price with other world markets, predominately Japan, for domestically grown canola seed.

The domestic market has readily accepted canola oil but has limited potential for expansion. Canada is already the largest per capita consumer of canola oil in the world. Canola oil currently captures 80 percent of the liquid or salad oil market, 50 percent of the shortening market, and 40 percent of all that used to produce margarine.

Table 4.4-1: 1988 Share of Deodorized Oil Production in Canada

Type of oil	Margarine	Shortenings	Liquid salad &cooking oils	Total
Canola	42.5	56.9	83.0	63.2
Soybeans	44.3	23.6	5.1	21.8
Others	13.2	19.5	11.9	15.0

Canada's small population will not likely provide any further potential for market growth. Thus, the domestic demand for oil will probably not increase for reasons other than population growth. The domestic market for edible oils is primarily in central Canada. Approximately one half of the oil produced in Manitoba is destined for Eastern Canada, one third to the United States, and a small amount, approximately 10 percent, to other world markets.

Export markets for canola oil have been constrained by tariff and non-tariff barriers. As well, Canadian canola oil exports have been underpriced by subsidized oil substitutes from competing exporting countries. Therefore, while canola oil exports have not been substantial, several markets have great potential.

a) Japan: Offshore export markets for vegetable oil are restricted as a result of tariff and non-tariff restrictions. As well Canadian crushers have alleged that off-shore sales have been limited by American and European subsidies. Entry into the Japanese market is limited by high tariffs in place to support the Japanese domestic crushing industry. As such, canola is exported in seed form, rather than as an oil, even though Japan would be a potential market for canola oil, if not for the tariff.

b) United States: Generally Recognized as Safe (GRAS) status in the U.S., and what appears to be the early adoption of a strong product image, could lead to an inelastic demand for canola oil and an opportunity for Canada to supply this demand. Recent awareness among U.S. consumers of oils and fats nutrition is creating interest in canola oil and optimism among Canadian canola processors.

The United States is a large market, though dominated by soybean oil. While canola captures 63.2 percent of the edible oil market in Canada, it comprises only 2.1 percent of the U.S. oil market. As such, to penetrate the U.S. market, canola oil, though a superior product, must currently sell at a discount to soybean oil.

The future of the processing industry in western Canada depends on the U.S. market. If canola oil were to capture just 7 percent of the market for edible oils, the annual North American demand for canola oil would be nearly 800,000 tonnes -an oil demand equivalent to Canada's current processing capacity.

The prospect for Canadian oil in the U.S. market also depends on the ability of American processors to serve their own market. There are currently several companies in the United States that either have

recently begun processing canola or have expressed interest in doing so. But the success of these companies depends largely on the American canola production base being developed.

As of yet, there has been little canola produced in the U.S. Information about U.S. canola production is rather limited and sometimes inconsistent. For instance, Cargill recently estimated the 1989 U.S. harvested canola area at 90,000 acres, in comparison, Oil World estimated that U.S. farmers planted 65,000 acres. Nonetheless, these amounts are small compared to the 7.2 million acres sown this year in Canada.

However, U.S. production could increase next year in the wake of legislative changes allowing American farmers to plant canola on land normally reserved for crops eligible for government subsidies. But the level of future U.S. canola production will ultimately depend on its profitability relative to other crops.

In the short run, disease and weed swill be a greater problem for American farmers than is the case for farmers in more established canola producing countries. This is primarily because knowledge now is lacking at the producer and extension levels.

American duties on canola oil and meal have hindered Canadian exports. Under the Free Trade Agreement, those charges will gradually be removed over the next nine years. There is some potential for this schedule to be accelerated, but this appears to be unlikely at the present time. In the meantime, this situation has created an incentive for firms to operate plants in the U.S. and import raw seed from Canada. Western Canadian processors estimate that they face $10 to $25 a tonne disadvantage on the price of seed in Canada compared to

their U.S. counterparts. The similar situation applies to Canadian crude oil - the duty on crude oil is less than that on refined oil. Such incentives culminated in the recent expansion by Canbra Food Ltd., a Canadian company, into Butte, Montana.

c) India: India had been a traditional market for canola oil, but it has been usurped by inexpensive palm oil, produced primarily in Malaysia.

Though canola oil has limited potential in the Canadian edible oil market, much greater opportunities exist with canola meal.

Still, while the potential exists, processors have not yet been able to develop a substantial local market for meal. Canola meal is used by poultry, dairy, and swine farmers, but there is some market resistance on the part of livestock producers. Rapeseed meal, the predecessor of canola meal, contained glucosinolates, the same compound that gives mustard its taste. After having been fed rapeseed meal, livestock went off feed, causing a prejudice that has carried over to canola meal, even though this problem has now been alleviated.

(iii) Summary: In analyzing the potential benefits of changes in the method of payment it is necessary to understand the markets for both canola seed and the processed products. It is the interaction within both of these markets that determines the prevailing crush margins. Knowing not only what margins currently exist, but also what factors affect them helps assess the lasting impact of a change in the method of payment.

As well, as discussed in the analysis, the location of the markets and the tariff barriers could influence where firms might locate investment in new plant and equipment.

Impact Analysis

A number of factors discourage canola processing in western Canada, but the most frequently cited and those believed to have the greatest effect are the subsidized WGTA rates and current method of payment.

There are three main ways in which a change in the method of payment would affect canola pricing: (i) processors would be able to buy lower priced canola seed, (ii) the local market for canola meal would expand, and (iii) processors would have access to an increased supply of canola seed. The first of these is expected to have the greatest and most direct effect on processors and would be reflected directly in their crush margins.

From the production shift analysis, the cost of raw canola seed could decline by between approximately $20 to $32 per tonne depending upon the location in Manitoba, scenario being examined and the assumptions made. The industry response to such a change in canola prices depends on the strength of the markets for canola seed and canola products. These markets will determine the crush margins that will prevail at a particular point in time.

The industry crush margin depends upon the age of the plant. A margin of between $45 and $55 per tonne is generally required to sustain production at full capacity. During 1989, the industry in Manitoba was operating only at a margin of $12 per tonne, but the effects of a lower canola seed prices would move this margin close to the desired range. Thus, it is expected that the processing industry in Manitoba, if such a change in canola prices were to occur, would increase production from the current 55 to 65 percent of capacity to 80 percent or more.

Whether the incremental price change in canola seed enables the industry to contribute to fix costs, thereby providing some amount of profit, depends on the future of the markets for canola seed and canola products.

For the canola seed market, this depends on the ability of the industry to bid competitively for canola seed. The primary factor currently preventing this is the Japanese oil tariff and premiums for cash prices in Vancouver due to storage influencing the efficiency of the Canada market pricing mechanisms.

In the future, it could also be dictated by the demand for Canadian grown canola from U.S. processors, and the ability of U.S. farmers to produce canola to be processed in that country. The former would have a negative influence on costs that western Canadian processors would pay for canola seed, while the latter would have a positive influence.

The future prospects for canola products depends primarily on the U.S. market. Currently, the acceptance of canola in the U.S. market is growing slowly, but this is a large market, and small gains could greatly benefit the canola processing industry in Manitoba. Still, canola oil will have to be distinguished in this marketplace or its price will continue to be depressed by substitutes, such as palm and soybean oil. The extent to which western Canadian processors are able to take advantage of market opportunities in the U.S. depends on the ability of American processors respond to emerging market conditions and the ability of American farmers to provide an adequate supply of canola.

To a lesser extent, the future of canola processing industry in Manitoba depends on the development of the canola meal market, both locally and in the U.S. Local expansion in livestock numbers means that there would a greater demand for locally processed canola meal. While both markets have shown some potential, the local market is still hampered by a negative product image, and the U.S. market is dominated by soymeal.

Even if crush margins were to improve such that a contribution was being made to fixed costs, certain factors may constrain investment or expansion in the industry, at least in the short run. These factors include:

(i) The debt load carried by the existing processors in western Canada would likely preclude any investment in refining or processing capacity in the short run. Accumulated losses suffered in previous years has left companies debt heavy. Any profits in the medium term would likely go towards servicing debt, rather than investing in facilities.

(ii) The volatility of the market could discourage any entrants into this market. Potential entrants into this market may be impeded by the risk associated with the industry. The current crushing margins together with the expected decreases in canola prices may still not justify the inherent risk in this industry.

(iii) There has been a trend for canola processing plants to locate closer to the final market for the product. This phenomenon has been dictated by the economics of product transportation. In general, firms will locate processing plants closer to the final market when the transportation costs for the processed product are greater than the transport costs for raw material. Such firms are termed "market oriented." Conversely, industries characterized by transportation costs greater for the raw product than for the processed product will tend to locate plants near the raw material supply. Firms in such industries are common in agriculture, because of the weight loss during processing, and are termed "material oriented."

There is little difference between the weight of the canola seed and that of the processed products. As such, there is little incentive to locate plants near the source of the raw product. In fact, the transportation costs of the canola seed are lower than those of the canola oil and meal.

As well, firms may locate plants near markets when there is a desire to gain greater access. Representatives in the canola industry cited this as a current trend. Because the future large markets for canola products are not in Manitoba, market access would not be a reason to locate a new plant in this province.

Because the domestic market for oil is saturated and the local market for meal is difficult to gain product acceptance, there is little incentive to locate an additional canola processing in Manitoba. More likely, in order to access the American market as it develops, plant investment will take place closer to the large markets.

(iv) While there may not be any expansion in capacity, investment in vertically integrated operations, such as in refining and packaging, could be a stronger possibility. This investment may provide the industry with stronger marketing possibilities and leave it less vulnerable to swings in the market. For example, while the Harrowby plant closed during the past year, the plant in Altona, as well as Nipawin, remained in operation. Canbra, located in Alberta, is more vertically integrated, marketing its products under its own brandnames. It has generated better financial results in recent years than less integrated firms selling unrefined oils.

Increased shifts in canola production may assist processors, but this would likely be outweighed by other factors. For example, processing plants such as the one in Velva, North Dakota would benefit equally - as much as plants located in Manitoba. As well, given current margins, increased canola production would not have much effect on the amount processed. Currently, there is an oversupply of canola in the system, yet market prices prohibit it from being processed profitably. Therefore, before increased supply would benefit processors, their margins must improve.

The production shift analysis indicated the shift into feedlot and hog production could be significant, increasing hog production by 525 thousand head and cattle by 58 thousand head, under the WGTA Total Rate scenario. While this expands the local market for meal, farmers have still not been very receptive to this product. Currently, only 10 percent to 15 percent of the local market is captured by Manitoba crushers. This would suggest that the opportunity for market expansion is significant if the product can achieve market acceptance.

4.5 Flaxseed Processing

Manitoba's production of flaxseed was valued at $71.8 million in 1988 and accounted for more than 50 percent of the total produced in Canada; yet, no crushing plant exists in the province. Still, some industry contacts believe that there is opportunity for some flaxseed processing.

Market opportunities for flaxseed oil exist in western Europe as an industrial product, and in Eastern Europe as a consumer product. But, before either of these markets can be developed, the local meal market must be developed. "Local" markets include all those within "truck haul" distance, i.e. markets in the U.S. as well as inter-provincial markets.

If a local meal market could be developed as well as the overseas oil market, a change in the method of payment could provide some incentive for flaxseed oil and meal production. This has been repeatedly investigated in the past without success. However, it is possible, perhaps likely, that with both lower flaxseed prices and excess capacity in Canada crushing plants, that potential could exist. In past studies a new plant could not be justified, however, such capital investment appears unnecessary because existing plants can be converted at little additional cost. Flaxseed oil (linseed oil) involves entirely different market channels than does canola, and these channels would have to be developed.

Thus some processing potential exists in this product.

4.6 Speciality Processing: Vegetables, Peas, etc.

Potatoes, commercial vegetable, greenhouse products and mushrooms represent a small but important segment of the total agri-food industry, at roughly $90.9 million in farm cash receipts in 1988, or 5.2 percent of the total. The Manitoba Vegetable Producers Marketing Board represents growers producing for the fresh market and in doing so, establishes production quotas.

The processing sector primarily involves potato and vegetable processing, with five major processing plants. A large percentage of potatoes, around 80 percent, are used in processing. Other processing sectors include freezing and enzyme extraction from vegetables, as well as pea processing. Pea processing involves a process of extracting pea fibre, pea starch, and pea protein and is presently conducted only by Woodstone Foods in Portage La Prairie. The market, while expanding, limits the overall production potential.

Opportunities exist for several of these sub-sectors. However, production shifts away from grains and into other specialty products such as those listed above are not projected to occur to an extent which would have a significant overall impact on the agriculture sector due to a change in the method of payment. The main opportunities for producers in moving away from grain production are in the livestock area as discussed above.

Still, there are currently several areas that are attractive opportunities for processing, and a change in the method of payment may provide some stimulus for plant investment.

Wet corn milling could hold potential in the future. Manitoba is the only western province that can dryland produce corn. However, before a plant will be built, an assured consistent supply is required. Manitoba currently produces approximately 90,000 acres of corn. A plant would likely utilize 11 million bushels, requiring at least 150,000 acres. It is conceivable that the incremental shift in crop production could be great enough to increase production to this level, but only as improved (shorter season) varieties are available to reduce production risks. Also, the current countervail duty on imported corn limits certainty of supply to a processor should the Manitoba crop fail.

In the short run, a wet corn mill is not expected, but it does hold potential in the longer term, and is more likely under a pay the producer scenario.

4.7 Flour, Semolina, Starch and Gluten Production

With all of these products, when based upon cereal grains, the production potential is expanded as raw grain prices decrease. However, for all, the factors of transportation economics, infrastructure support required and existing industry location create a strong probability that any expansion which would occur would be located near large markets, likely in southern Ontario.

With pasta, there is some potential for expansion of piants due to the growing market. However, discussions with the industry indicate that a plant in western Canada would be more probably located in Saskatchewan (with its larger durum production) than in Manitoba.

4.8 Forages and Products

With the increase in livestock production, it is expected that the demand for forage will increase. The majority of this demand will be met by forage harvested as bales or silage, thus having little impact on dehydration plants for

alfalfa. Manitoba presently has three alfalfa processing plants which produce primarily for export markets and face strong competition from the U.S. industry. These "dehy" plants will face an increase in freight costs and will be adversely affected in their ability to compete in distant markets, either within North America or offshore.

The processing of forage seed may see some expansion as production increases, especially in the more northern areas, including the Interlake. Limited size markets exist which can easily be flooded.

4.9 Beverage Industry

The beverage industry includes both alcoholic beverages and non-alcoholic beverages, of which only alcoholic beverages would possibly be impacted by a change in the method of payment, causing a decrease in the price of grains. Specifically, in Manitoba, brewing of beer is the primary sector in the alcoholic beverage sector. Processing sector involves supply of malting barley to the few major breweries in Manitoba (three, pending merger of two). While the brewing industry is significant to the province, it is anticipated that due to the CUSTA, some rationalization in the brewing industry in Canada will take place, as the number of breweries, relative to consumption, is high in Canada compared to the U.S.

Thus, this indicates that economies of scale require large brewing plants, rather than plants in each provincial jurisdiction as is presently required due to interprovincial trade barriers. This potential rationalization will likely lead to concentration in areas with large populations, creating an uncertain future for Manitoba's breweries.

The malting sector, which supplies the brewers, has been operating at capacity for some time due to a stable domestic market and successes in the export markets, especially Japan and the Pacific Rim.

A change in the price of malting barley is not expected to impact the malting sector in Manitoba. The domestic market size limits any expansion and the decrease in the price of barley contributes an insignificant amount to the retail price of beer.

In the export market, the price to the maltsters from the CWB has been an internationally competitive price, which will be relatively unchanged after a change in the method of payment. Thus, the maltsters will be relatively unaffected.

4.10 Ethanol

While some production presently occurs in Manitoba through Mohawk Oil Company's 8 million litre per year plant in Minnedosa, utilizing barley, it is not expected that further expansion will occur due to a change in the method of payment.

Ethanol production requires substantial subsidies in order to be economic. The projected price changes under a change in the method of payment, are not sufficient to make ethanol production profitable, unless:

- public support encourages government to increase tax exemptions,
- capital costs for a plant were reduced/eliminated through government subsidies.

As neither of these alternatives appears likely, this potential for expanded production of ethanol appears unlikely.

Appendix 1

MANITOBA % OF CANADA

	% of Production	% of Slaughter
1979	9.6	9.3
1980	8.6	8.9
1981	8.8	8.9
1982	8.8	8.8
1983	8.7	9.3
1984	9.6	9.3
1985	10.9	10.9
1986	11.0	11.8
1987	11.0	11.7

SECTION II

An Analysis of the Impact of a Change in the Method of Payment of the Crow Benefit on the Transportation and Handling Sector in Manitoba

1.0 INTRODUCTION

This report has been prepared as a part of an overall analysis of the impact on Manitoba of changing the method of payment (MOP) of the "Crow Benefit" for export grains.

Specifically, this report provides an analysis of the impact of changing the method of payment on the grain transportation and handling systems in Manitoba. Additionally, the secondary impacts of a change in production patterns of Manitoba agriculture are also reflected in the analysis.

The basic assumptions analyzed here reflect the following:

- a change in the MOP may result in Total WGTA freight rates being charged to the producers to ship their grain, or

- a change in the MOP may result in producers paying "Commercial Rates" (either rail or truck to export position) that represent the lowest cost alternative,

- a possible change in the freight direction alternatives to include exporting via the U.S. Gulf ports as an option available to producers,

The following impacts were addressed as well:

- the quantity of rail line abandonments that may result from a change in the MOP as well as the various assumptions noted above,

- the change in existing facilities that would be needed to accommodate the impacts of changing the MOP as well as the impact upon the timing of those changes which would occur regardless of changes in the MOP,

- changes in the trucking patterns that would accompany the change in production patterns, the change in freight costs payable by producers, the change in handling infrastructure that would result from a change in the MOP,

- changes in the capital and maintenance programs required for the Provincial and Municipal road systems as a result of the changes noted above.

1.1 The Study

Section 2 develops the cost basis for comparison of freight charges by crop designation (board grains versus non board grains), originating point in Manitoba, and transport mode. Basic assumptions in freight costs are reflected in figure 2 - 1 with each direction being treated separately in figures 2.2 to 2.3. Section 3.0 deals with the impact of the change in production volumes and patterns as they affect the transportation and handling system.

Section 4.0 is a discussion of the regulatory factors that will be affected by the change in the MOP and the resultant changes in the transportation and handling system. This section demonstrates the multifaceted impact of changing the MOP and the need to implement changes to the regulatory environment that the system operates within at the same time as changing the MOP. The need for reviewing the institutional and regulatory factors relating to the transportation and handling system in conjunction with a change in the MOP is made evident.

Section 5.0 identifies the changes in the system that are expected to occur regardless of changing the MOP. It also identifies what additional changes are expected both in scope and timing of changes that are expected.

Section 6.0 identifies the impact of the modal shifts and changes in direction and volume of traffic patterns on the roads operated by the two local levels of government.

Of special note is the fact that while this study and report focus on changes which might occur to the transportation and handling system in Manitoba, it is recognized that the focus on quality in our export standards and system must be maintained. Exports will continue to represent a substantial market for Western Canadian farmers. The quality image that Canadian grain has in world markets is a valuable competitive advantage, especially when compared to the U.S. grain grading and quality standards system.

Also, when increased efficiency or competitiveness is discussed, it is not to be implied that the present handling and transportation systems are inefficient. To the contrary, the Canadian system has performed well. However, changing costs and conditions require further change in the future.

2.0 TRANSPORTATION & HANDLING COSTS

Changing the MOP to pay the producer entails transferring full control over the payment for freight to the producer. A variety of factors in addition to the freight rates will affect producers decisions regarding where, how and whether the grain is to be shipped. An understanding of the factors influencing these decisions and how they interrelate is a prerequisite to identifying the likely impact of changing the MOP.

It should be remembered that while this study focuses on the potential increases in freight costs to the producer, these increases would, on average, be offset by the Crow benefit payment described in Section I of the previous (second) discussion paper. Thus farmers may see no negative financial impacts.

The shipping points analyzed have been chosen to show any locational differences in impact between the scenarios examined across Manitoba. The scenarios examined include the following:

1) Changing the Method of Payment to charging the producers with the Total WGTA Rates.

2) Changing the Method of Payment while allowing the freight costs to adjust to commercial rates for rail and truck.

A brief description of what has gone into the freight rate analysis is provided prior to interpreting the numerical results.

2.1 Rate Schedule - Methodology

All freight rates have been prepared using a common methodology and common assumptions. In figure 2.1, the categories for cost breakdown are listed for the Canadian routes and an alternative southern route (Mississippi - New Orleans).

2.1.1 Canadian Routes

Item #1 in each table (see fig. #2-1) identifies the costs that producers pay under the current structure where WGTA rates are paid partly by the shipper and partly by the federal government. The portion of the rail freight that the producer pays is identified as "WGTA charges".

"Prim. Elevation & Term. Cleaning" provides a sum of the costs charged at the primary elevators for receiving, elevating and load out plus removal of dockage at the terminal elevator - the assumption being that all grain contains sufficient dockage to warrant being assessed the cleaning charge.

"Allowance for delivery to elevator" is calculated for all grain producing areas within 30 miles of a grain delivery point. This assumes that for deliveries within this distance, the majority of the cost of the delivery are constant in that they include a portion of the costs of truck ownership, costs for conveying equipment to load it as well as the labour costs including time required for loading and unloading. These are all unchanged with distance from the elevator. Further, the time required for travel to and from the elevator constitutes a relatively small percentage of the total time. The primary objective in assigning a value to this function was to permit a realistic comparison between use of rail services and trucking directly to export position.

"Total Current Cost" is simply a sum of the above factors. This does not include the terminal charge to receive, elevate, and loadout grain.

Item #2 provides a summation of the same three factors with the exception that "WGTA Cost" is used in place of "WGTA Charges". WGTA Cost represents a sum of the producer portion and the government portion of the payment to the railway for transporting the grain, i.e. Total WGTA Rates.

FIGURE 2.1

TRANSPORT AND HANDLING COSTS FOR CANADIAN SHIPPING ROUTES

1) Current Cost to Producer:
   WGTA charges
   Elevation and Terminal Cleaning
   Allowance for delivery to elevator
   Total Cost to Producer

2) Current WGTA cost:
   Total WGTA Rates instead of just the producer portion
   Total current cost under WGTA

3) Truck from farms to Shipping Port
   Cleaning and Receiving charge
   Total (plus terminal charge)

4) Rail, primary elevators and delivery

5) Minimum Rate Decrease
   Commercial Rates
   WGTA Rates

The "Total Cost under WGTA" represents the total cost that the producer would pay if the entire WGTA rate were charged but not including the terminal charge to receive, elevate and load out.

Item #3 "Truck from farm to port" reflects commercial trucking the grain directly from the farm to terminal position. No primary elevation or rail freight costs are included. There is however the same cost for dockage removal at the terminal and an additional charge for receiving from trucks at the terminal, that together constitutes the "Cleaning & Add. Truck Rec. Chg." The sum of these factors is the "Total Cost via Truck" which does not include the terminal charge to receive, elevate and load out.

Item #4 "Rail, Prim. Elev. & Delivery" reflects the sum of the primary elevation and delivery charges described in Item #1 above, but with commercial rail rates which would apply to bulk granular products shipped on main lines in significant lots. This commercial rate would be used rather than WGTA rates.

Item #5 "Minimum Rate Increase" - these numbers reflect the minimum increase in costs to the producer to ship grain depending upon whether Commercial Rates apply or whether the Total WGTA Rates apply.

Assumptions made are consistent and include:

- Assuming that the competition from trucks will limit the rate charged by the rail companies. The rail rate used for main lines is expected to be lower than the rates applied to branches. The maximum amount by which the branchline rate could exceed the rate charged on the main line is equal to the cost to truck the grain to the nearest main line. Therefore, though the branchline would continue to exist, for purposes of estimating the freight cost for grain produced near the branch line, the freight cost

to truck the grain to the nearest main line is assumed to be the cost that would apply.

- Deliveries within 30 miles of the elevator are all of basically the same cost,

- Rates used per tonne mile. After discussion with railway and industry representatives and review of rates charged on other commodities, the rate of $0.031 was used as indicative of what might be an average rate charged on main lines. This would be expected to vary from place to place - particularly where competition from direct haul trucking (all points east of Carberry - see fig. #2-2) was a real alternative. This rate could be reduced further by:

  - increasing the car spot capacity at delivery points to 30 cars or more,

  - reducing the amount of switching required at the terminal elevators by optimal scheduling of shipments and by co-ordinated management of the terminal operations.

- The rates used for trucking reflect a distance correlation and are supported by commercial haulers contacted and other credible grain transportation studies.

- WGTA distance was used for both rail and for truck haul. This will introduce some slight inaccuracy in the results but this inaccuracy is deemed to be insignificant when developing a comparative cost analysis where absolute values are of less consequence than relative values.

2.2 Transportation & Handling Charges - Farm Yard to Thunder Bay

The minimum rate increases for commercial rates and WGTA rates are presented in figure 2.2. The term "Commercial Rate(s)" refers to the lowest rate offered by a carrier under a non regulated pricing scenario. These may be higher or lower than the WGTA rates and may represent any combination of modes (including rail) available for transport of grain to port. Two important issues are raised by this data including:

1) The change to full costs from what farmers currently pay for shipping grain to Thunder Bay will increase the cost for the various points selected for the analysis by:
   - $14. - $18. under full WGTA rates
   - $4. - $18. under commercial rates

   The amount of the increase under commercial rates will be both distance related from Thunder Bay and location related relative to main rail lines, and is expected to be in the range of 0-$10/t less than under WGTA rates.

2) Commercial trucking will provide real competition for the existing primary elevator and rail system even if rail transportation is allowed to be priced on a commercial basis. This competition will control the rates charged by the railways and it is the risk of loss of freight volume to direct haul trucking which will limit abandonment of branch lines by a railway.

TABLE 2.2

Transportion and Handling Charges - Farm Yard to Thunder Bay

	Winnipeg	Oakville	Carberry	Virden	Dauphin	Roblin	Swan Riv.	Arborg	Winkler	Pilot Mnd	Boissevain
1) Current Cost to Producer:											
WGTA Charges	$6.03	$6.33	$6.63	$7.07	$7.22	$7.52	$7.82	$6.48	$6.48	$6.78	$7.22
Prim. Elevation & Term Cleaning	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10	$12.10
Allowance for Delivery to El.	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62	$4.62
Total Current Cost	$22.75	$23.05	$23.35	$23.79	$23.94	$24.24	$24.54	$23.20	$23.20	$23.50	$23.94
2) Current WGTA Cost	$20.31	$21.31	$22.31	$23.81	$24.31	$25.31	$26.31	$21.81	$21.81	$22.81	$24.31
Total Cost Under WGTA	$37.03	$38.03	$39.03	$40.53	$41.03	$42.03	$43.03	$38.53	$38.53	$39.53	$41.03
3) Truck from Farm to Thunder Bay	$23.38	$24.75	$28.88	$33.00	$34.38	$37.13	$39.88	$27.50	$27.50	$30.25	$34.38
Cleaning & Add. Truck Rec. chg	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50	$3.50
Total Cost via Truck	$26.88	$28.25	$32.38	$36.50	$37.88	$40.63	$43.38	$31.00	$31.00	$33.75	$37.88
4) Rail, Prim. Elev. & Delivery	$29.90	$30.67	$33.00	$35.32	$36.10	$37.65	$45.08	$33.14	$33.14	$33.31	$36.25
5) Minimum Rate Increase:											
- Commercial Rates	$4.13	$5.20	$9.03	$11.53	$12.16	$13.40	$18.84	$7.80	$7.80	$9.81	$12.31
- WGTA Rates	$14.28	$14.98	$15.68	$16.74	$17.09	$17.79	$18.49	$15.33	$15.33	$16.03	$17.09

- Terminal Elevation & Loadout charges are additional to these totals
- Deliveries within 30 mile of the elevator are all of the same cost
- Truck to Dauphin from Swan River
- Truck to Glenboro sub. from Napinka and LaRiviere sub.
- Rates used /t/mile are: truck (short haul) $0.154; truck (long haul) $0.055; rail $0.031 (commercial) or total WGTA
- The WGTA distance is used for rail and for truck

2.2.1 Charging Full WGTA Rates

A "simplistic" approach to a change in the method of payment, to pay the producer, and charging farmers full WGTA rates to ship grain to Thunder Bay will not be an acceptable option without also changing the regulatory environment and allowing the existing system to more effectively compete with commercial truckers. As can be seen in Figure 2.2 from the rate comparison, direct trucking of grain from farm to Thunder Bay (#3) is lower in cost in all cases (except Swan River where it is essentially equal), than the full WGTA rates (#2). This would mean that unless new constraints were placed on commercial trucking, virtually all 4 million tonnes or more that is shipped from Manitoba via Thunder Bay could attempt to go by truck at lower cost. Obviously the infrastructure is not sufficient to handle more than a small portion of this volume.

Though the infrastructure (in terms of number and size of trucks, highway capacity, connecting routes through Thunder Bay to the terminals, and the terminal receiving facilities) is quite inadequate to the task of a major shift to direct trucking, enough grain could move by truck to disrupt normal operations and traffic patterns and also create competition to the railways.

2.2.2 Charging Full Commercial Rates

Due to the significant savings available to farmers on low cost lines, they would probably increase pressure for deregulation of the WGTA rates, potentially leading to commercial rates for low cost lines. A shift to commercial rates would mean that all grain east of Carberry and Pilot Mound would move east via truck or south via the Mississippi (if the institutional constraints would be relaxed). This would amount to roughly half the grain shipped east from Manitoba or some 2 million tonnes per year (less adjustments for production shifts attributable to the increased freight costs).

The most obvious means to regulate the amount of trucking would be to allow the grain companies to raise the additional charge levied on truck deliveries at the terminal from the current $1.50/t to the $3.50 to $4.50/t range. The more aggressive firms however, would secure a higher percentage of the grain available by upgrading their facilities and charging less for truck deliveries. This will induce further competition between grain companies and foster trucking. Alternatively, special taxes or charges for grain transport would have to be levied in addition to what is charged on other bulk commodities.

Competition for trucking in this area could come from four sources:

1) Producer cars where grain could be loaded into rail cars without being graded or blended by commercial operators (bypassing the primary elevator).

2) Grain companies offering "delivery premiums" for delivery of grain to their elevators under specific conditions such as carlot volumes during specific time periods, - in effect lowering their primary elevation charge for deliveries requiring less service and involving lower costs. This practise is normally restricted to non board grain where revenue is available from other than just the handling fees applicable to board grains.

3) "Aggressive" grading practises by elevator operators.

4) Revisions to the regulatory and institutional environment allowing greater flexibility for the systems such as:

   - allowing the grain companies a greater degree of influence on car allocations and the distribution of cars allotted to their company, and,

- the ability of the rail companies to negotiate point specific freight rates/service agreements with the grain shippers.

- allowing adjacent elevators of competing grain companies using common spur tracks to cooperatively benefit from the reduced rail rates available from larger car allocations,

- allowing short line rail companies to assume operation of some of the higher cost branch lines,

These and other regulatory and institutional implications are dealt with in greater detail in section 4. An increase in the flexibility of the regulatory and institutional environment is viewed as being the only means by which the existing system of elevators and rail could effectively compete with commercial trucking.

Thus, a change in the method of payment is likely to have very substantial implications for direct and especially indirect pressures for change in the regulatory environment, potentially leading to significant deregulation.

Items 2) and 3) above are used effectively already and are not likely to have the impact needed to stem a shift toward trucking. A combination of aggressive rail freight rates and items #1 and #4 above are expected to have the greatest impact.

2.3 Transportation & Handling Charges - Farm Yard to New Orleans

This option is included to examine the relative costs of shipping via the Mississippi River and New Orleans. The lines in Figure 2.3 are explained as follows:

Item #1 - "Truck from farm to St. Paul" assumes that producers pay commercial trucks to haul grain by truck to transfer points on the upper Mississippi River. "Estimated Cleaning Charge" is added to compensate for preparing grain to Canadian export specifications. This could occur either at St. Paul or New Orleans. "Transfer and Barge" assumes commercial U.S. rates for handling and shipping. The total cost does not include terminal charges for loading ocean going vessels at New Orleans.

Item #2 - "Rail, primary elevation and delivery" assumes the same costs for all logistical functions as Item #1 except for delivery from farms to the upper Mississippi transfer points. Under this scenario, grain is delivered to Canadian primary elevators and is shipped by rail to Minneapolis. Subsequently, the grain travels "in bond" to the U.S. export terminal elevator.

Item #3 - Compares minimum freight rate increase for the southern route under commercial rates.

In developing the allowance for "Cleaning & Blending" the assumption is made that grain exported via the Mississippi would be required to meet the same standards as that being exported through Vancouver or Thunder Bay. Since facilities do not exist in the United States to clean and blend grain to meet our standards, the assumption is made that the grain would be processed and weighed in Canadian facilities probably located in Minneapolis and shipped in bond through the United States. Some effort would be needed to work out the logistics of this.

As an estimate of the cost to operate facilities of this nature, approximate operating cost for terminal facilities were obtained from industry representatives. The cost used ($15/t) reflects predominately volume related operating costs with only minimal allowance for the cost of capital or other fixed costs. The cost is representative of the cost to operate fully depreciated capital facilities similar to our terminal elevators.

In addition the value of the screenings generated would yield approximately $1/t of grain (based on screenings valued at $55/t and 2% average dockage) from operation and the blending process would yield an additional $3 to $5/t. These revenues may (depending upon the volume handled) combine to justify the development of the necessary capital facilities.

Barge rates on the Mississippi vary considerably from year to year depending on the volume of US grain exports. In conducting this costing exercise, two barge rates were examined. A full cost recovery rate was included to represent a year with large U.S. grain exports and low competition amongst the barge operators for freight. The second rate reflects a low volume year when barge rates cover little more than the variable costs of operation.

A comparison of Figures 2.2 and 2.3 suggest that there would be no interest in utilizing this southern route. However, if a change in CWB pooling was to occur, thus increasing Manitoba producers' deduction for freight to the St. Lawrence by $21 to $22 per tonne, the costs of the southern route would be similar, in some years. At times there could be significant pressure in southern Manitoba for the use of the Mississippi River during a year when that route had low volume, and low rates, such as 1989.

If the institutional constraints to use of the Mississippi were removed, the CWB pooling system was revised to FOB St. Lawrence, and 1989 U.S. freight rates prevailed, exports via this route would be in the order of 1.5 million tonnes per

year - given fully commercial rates were used in Canada and no production shifts took place. Virtually all (some 4 million plus tonnes per year) of Manitoba grain exported east would go via the Mississippi if grain was pooled fob St. Lawrence, total WGTA rates prevailed on Canadian routes and 1989 rates prevailed in the U.S. It should be noted that the production shifts affects of pooling the grain fob St. Lawrence may preclude the availability of these volumes for export. On a high volume export year, there would be less incentive to use the U.S. system, because the Canadian transport and handling system is generally less expensive. Of course, the Canadian system could not be maintained at this cost as a "stand-by" alternative whenever export volumes are sufficiently large.

A pertinent question that is beyond the scope of this study is whether - during a year of high volume and high demand for service from American shippers, the United States freight companies and regulatory authorities would allow access by Canadian freight. The system is maintained by the Army Corps of Engineers & others paid by subsidies from the American tax payers and the facilities have a much faster capital tax write down rate than is allowed in Canada, on Canadian facilities. Given this level of public financial support - some question of access by non-tax paying Canadians would surely arise.

Therefore, it would appear unlikely that the use of this southern route could become practical.

TABLE 2.3

New Orleans

Transportation and Handling Charges - farm yard to New Orleans

	Winnipeg	Oakville	Carberry	Virden	Dauphin	Roblin	Swan Riv.	Arborg	Winkler	Pilot Mnd	Boissevain
1) Truck From Farm to St. Paul	$24.86	$27.23	$30.80	$33.55	$34.65	$38.78	$40.15	$29.15	$23.93	$26.95	$30.80
Estimated Cleaning Charge	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
Transfer & Barge (*)	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63
Transfer & Barge (**)	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31
Total (plus terminal charge) (*)	$58.49	$60.86	$64.43	$67.18	$68.28	$72.41	$73.78	$62.78	$57.56	$60.58	$64.43
Total (plus terminal charge) (**)	$49.17	$51.54	$55.11	$57.86	$58.96	$63.09	$64.46	$53.46	$48.24	$51.26	$55.11
2) Rail, Prim Elevtn. & Delivery	$28.73	$30.07	$32.08	$33.63	$34.25	$36.58	$37.35	$31.15	$28.21	$29.91	$32.08
Cleaning & Blending	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
Transfer & Barge (*)	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63	$18.63
Transfer & Barge (**)	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31	$9.31
Total (plus terminal charge) (*)	$62.36	$63.70	$65.71	$67.26	$67.88	$70.21	$70.98	$64.78	$61.84	$63.54	$65.71
Total (plus terminal charge) (**)	$53.04	$54.38	$56.39	$57.94	$58.56	$60.89	$61.66	$55.46	$52.52	$54.22	$56.39
3) Maximum Commercial Rate:											
- Commercial Rate (*)	$58.49	$60.86	$64.43	$67.18	$67.88	$70.21	$70.98	$62.78	$57.56	$60.58	$64.43
- Commercial Rate (**)	$49.17	$51.54	$55.11	$57.86	$58.56	$60.89	$61.66	$53.46	$48.24	$51.26	$55.11

- Deliveries within 30 miles of the elevator are all of the same cost
- Truck to Dauphin from Swan River
- Rates used /t/mile are: truck (short haul) $0.154; truck (long haul) $0.055; rail $0.031 (commercial) or total WGTA
- (*) reflects full cost recovery on fixed costs ie. a high volume year with low competition for freight
- (**) reflects variable cost recovery only ie. a low volume year with high competition for freight

3.0 IMPACT OF PRODUCTION SHIFTS ON TRANSPORTATION AND HANDLING

The decisions that producers would make are fundamental to identifying the impact of changing the MOP and to a large extent will dictate the adjustments of the transportation and the grain merchandising companies. These decisions and their impacts will occur even though producers would still receive the Crow benefit payments to offset the extra freight charged to them. Section I of the second discussion paper clarifies the impacts of the alternative payment mechanisms.

A review of the impact on production of changing to a pay the producer system was presented in Section II of discussion paper #2 on the review of the impacts of changing the MOP. A summary of those aspects of the shifts in production which are expected to impact directly upon the transportation and handling systems is contained here.

The most relevant factors are best demonstrated by the tables below:

- Provincial Shifts - WGTA Total Rate with Market Absorption:

Crop	Change in Production
Wheat	- 1.6%
Barley	+ 5.5%
Canola	+ 2.9%
Oats	+ 5.6%
Flax	+ 3.8%
Forage	+ 2.1%

- Regional Shifts with Market Absorption - WGTA Total Rates:

Crop	Region 1	Region 2	Region 3	Region 4	Region 5
Wheat	+<1%	- 1%	+10%	- 4%	-13%
Barley	-<1%	+37%	-18%	-14%	- 2%
Canola	+12%	+ 6%	+ 4%	- 3%	-13%
Oats	+ 5%	+ 8%	+15%	- 1%	+ 8%
Flax	- 2%	+ 6%	-	+ 6%	-<1%
Hay	+ 4%	+ 2%	+ 3%	+<1%	+ 2%

It is expected that the volume of forage produced will increase by more than the level shown in the table to supply increased demand from the beef sector.

The impact of a shift to producers paying the full WGTA rates on the transportation and handling system (and receiving an offsetting Crow benefit payment) comes largely from the shift in barley and livestock production. The current production of approximately 2.0 million tonnes of barley supplies a local market of some 0.8 million tonnes, and an export market of about 1.2 million tonnes per year (including out of province market of some 0.4 million tonnes, plus an offshore export market of some 0.8 million tonnes).

Under a system of producers paying the full WGTA rates (and receiving an offsetting Crow benefit payment) Manitoba barley production is expected to increase about 5% to 2.1 million tonnes and the livestock industry is expected to increase the local consumption to 1.6 million tonnes per year. The export volume then would be approximately 0.5 million tonnes, or a net reduction in exports handled by our elevator and rail system of 0.7 million tonnes of barley per year.

These changes will vary regionally as well, where the south central region might have an increase in barley production and all other regions having a decline in the volume of barley produced. Large increases in the number of livestock fed can be expected in the south central region as well.

The increase in local consumption of feed grain and forage indicates an increase in the amount of trucking of farm commodities generally; including feed as well as more local consumption of protein supplements produced in Manitoba (Canola meal) and transportation of live animals as well as finished products.

The increase in production in the south central area might be sufficient to meet the needs of the expanded livestock sector. Whether the decline in exports from the south central area would be greater than or less than for other areas cannot be accurately predicted at this point.

The number of grain elevators lost to rationalization from this region (see section 5.1) compared to the number lost in other areas of the province is not predictable and would be affected by production shifts in both grain and livestock.

All other production shifts are within the range that occur annually due to weather factors and do not represent a sufficiently large shift in production to reflect predictably in the transportation and handling system.

4.0 REGULATORY AND INSTITUTIONAL IMPACT OF A CHANGE FROM THE STATUS QUO

Changing the MOP increases the responsibility and opportunity of producers to decide how, and whether to ship products to export locations. This change will precipitate a need to adjust the regulatory and institutional environments to achieve whatever objective is resolved as being desirable. After the options for the payment mechanism (discussion paper #2, Section 1) have been narrowed to a more manageable level, a detailed review of the regulatory system should be undertaken in more depth. The overview presented here is an attempt to demonstrate the interrelationships between freight decisions which might be made by producers under the changing MOP and the regulations that currently govern grain shipments.

A move towards producers paying full rates, whether the WGTA rate structure or commercial rates, means that the existing railway/elevator handling system must become more competitive if it is to compete with alternative modes of transport (trucking) and even directions of travel (southern routes) if the CWB pooling system was revised.

An understanding of how the system currently operates, and the on-going process of rail-line/elevator rationalization is necessary in order to appreciate the potential impacts of changing the method of payment. There are two distinct aspects of the rationalization process - Country elevator operations, and Railway operations. These are dealt with in sections 4.0.1 and 4.0.2 respectively.

4.1 Country Elevator Operations

The economic factors causing the rationalization of country elevator operations over the last ten to fifteen years include:

1) control over delivery of grain by farmers
2) the necessary minimum throughput for viable country elevator operation.

1) Control over Delivery

These factors are closely linked and interdependent. The grain companies are volume driven in terms of justifying an individual facility and market share driven in terms of their operations on any one train run as well as their terminal operations and non board grain operations.

As the system currently operates, the CWB controls the deliveries of board grains via their price setting and marketing responsibilities and via their car allocation activity; the Canadian Grain Commission controls the maximum handling tariffs; and both the CWB and the GTA control the

allocation of the rail cars by train run for use by the elevator companies in shipping the grain. Control of car allocation by the grain companies is limited to those cars allocated to their company within a train run amongst their facilities. The grain companies, therefore, are limited in the means they have available to attract the necessary volume of grain to their facilities that is required to make them viable, or to effect its shipment once obtained.

The usefulness of the quota system in encouraging timely delivery is limited when grain stocks are low. This, combined with the reduction in storage capacity in the country elevator system has made the co-ordination of supply with market delivery obligations more difficult for the CWB. As a result the CWB has begun to use producer delivery contracts as a more reliable means of securing supplies.

2) Minimum Throughput

The country elevator is essentially a fixed cost asset with its economic viability directly related to annual throughput. The "Primary Elevation" charge reflects the average costs that elevator companies incur in operating their system of elevators. Note that it is an average rather than the marginal cost of elevating the last truck load of grain or even the average cost at high volume points. Appendix "A" displays the impact on elevator viability of increased annual volumes.

The majority of the elevators would be able to handle two to ten times the annual volume that they currently receive, if they could effect more control over farmer's delivery patterns (ie. encourage farmers to deliver more consistently through the year rather than primarily during June and July). They could increase their efficiency significantly with larger volumes handled. Doubling the throughput of any given facility

would virtually cut the operating costs in half if it could be scheduled to permit doing so without adding to staff. This is the most effective way of reducing handling costs at the primary elevator.

Facilities having an annual throughput of less than 20,000 tonnes are generally being phased out of the system. New facilities are being designed to handle a throughput capacity of 50 to 70,000 tonnes per year. Whether they are able to attract sufficient volume depends on their ability to attract grain to their facilities, and once attracted, whether or not the elevator can get the cars allocated to ship the grain.

Wheat and barley constitute approximately 85% of the grain moving through the elevator system. The sourcing of wheat & barley and the cars needed to ship it to export location is dictated by CWB. The reduction in the unit costs of handling however will influence whether the grain is delivered or whether it bypasses the primary elevator system and farmers attempt to move it by truck. Clearly the ability of the primary elevators to cut or prevent increases in their charges to producers is dependant upon greater control of these two factors by the elevator operator.

Differential tariffs for handling large volume deliveries by appointment in tight time frames (similar to producer car conditions) might be an alternative which would allow the elevator system to compete with direct trucking to terminals or producer car shipments.

Under a full cost recovery freight rate structure, the unit operating costs of the primary elevator system would be critical to their ability to compete with the alternative modes and direction of freight. Some means of sharing the control would need to be developed between the grain companies and the CWB. Otherwise, up to 2 million tonnes of grain per year could move

by truck either to Thunder Bay or possibly directly into the United States. The elevator cost analysis in appendix "A" illustrates this point.

4.2 Railway Operations

The railway companies currently, and under a "simple" pay the producer system, would continue to operate under WGTA legislation which has the effect of limiting flexibility for:

- charging rates that reflect the cost of service, including lower rates,
- deleting branches that cannot be justified on an economic basis,
- committing to long term service agreements, and
- adjusting rates in negotiations with the grain companies that reflect the conditions at specific locations (attributable to capital improvements or volume commitments made by the grain company). Incentive rates are allowed, but under restrictive conditions.

In short - the institutional and regulatory environment under which the existing system (Grain companies and Railways) now operates, might prevent them from competing effectively with the alternative modes of transport which would appear to be competitive if a change is made to pay the producer. Either the constraints that the WGTA rates and other regulations place on the rail based handling system need to be relaxed or new regulatory constraints applicable to trucking need to be introduced, so that both modes have an equal opportunity to compete.

On this basis then the institutional impacts associated with the sets of assumptions contained in the terms of reference, may be addressed. The assumptions include:

1) change to full WGTA freight rates,
2) change to commercial freight rates.

4.3 Change to Full WGTA Rates

WGTA rates to Thunder Bay were estimated in figure #2-2 to be significantly higher than commercial rates under the circumstances of the given scenarios. If resource neutrality is an objective of the MOP, the rate structure based upon the WGTA rates will not achieve this result. Although the affects are probably not large, the WGTA rates do encourage exports through the West Coast, relative to Thunder Bay.

Another reason for preserving WGTA rates would be to support the retention of the higher cost branch lines which would no longer be used by farmers if their higher operating costs were not "pooled" with the remainder of the system. Relative to the other prairie provinces, relatively little impact upon the average haul distance to alternate rail lines would result from the abandonments that might take place in Manitoba, due to a change in the MOP or to a change in rate structure. While this does nothing to satisfy those who wish to see the system costs reduced, it would reduce the extent of the change created by a change in the MOP.

The small number and short length of high cost branch lines in Manitoba would mean that the majority of the difference between the WGTA rates and actual cost of rail operations would go towards offsetting the cost of high cost branchlines in Alberta, and Saskatchewan. It would appear that Manitoba farmers would not likely be willing to pay in excess of what it would cost them to haul their grain directly to Thunder Bay by truck, i.e. farmers would press for the opportunity to use the lowest cost freight system.

Rates for rail shipment in excess of the lowest possible rate would be difficult to sustain in Manitoba because of the competition from other transport alternatives, without some regulatory means. In particular, additional regulatory (economic) changes to trucking would have to be introduced in conjunction with a shift to full WGTA rates, to offset the advantage that commercial trucking rates would have over the WGTA/commercial rate structure. Otherwise major shifts to long haul trucking of grain would take place over time. This shift would create economic pressures or even spell the demise of the elevator system in the areas most affected, because the grain could completely bypass the local elevator points.

Cleaning facilities in western Manitoba would also need to be developed to clean canola to export standards.

4.4 Change to Commercial Rates

If grain is allowed to be transported under commercial rates, all of the regulatory changes discussed in sections 4.0 & 4.1 will be required.

This will allow the existing system (elevators & railways) to compete effectively.

If a change in the MOP was to occur, the alternative of direct trucking would appear necessary to control the transportation rates set by the railways. If there is a threat of losing of freight i.e., if there is competition from trucking, the rates charged by the railways will be held to a minimum. Therefore, under a change in the MOP a trucking industry should be allowed to develop and the upgrading of terminal facilities in Thunder Bay to receive from trucks should not be discouraged.

Additional transportation alternatives which might develop under a pay the producer system include:

1) the development of short line rail service companies to operate those branch lines that are "high cost" relative to the main lines, but which service operable grain elevators and a well maintained road bed. A more detailed assessment of branch line abandonments is given in section 5 however the C.N. Carberry sub, the CN Rossburn sub, and the CP Arborg sub would each be candidates for such operations. The viability of this option is largely dependent upon there being an opportunity to increase labour cost efficiency. Recent court decisions regarding the "Stettler" line may limit the viability of this option.

2) the development of producer car loading facilities on main lines to intercept trucks bound for Thunder Bay. Such facilities might be owned by brokers, trucking companies, or by the railway companies. Revisions to the car allocation process would be necessary if such facilities were to exist.

3) removal or lessening of regulatory and institutional constraints to exporting non board grain south through the U.S. will function similar to a viable trucking alternative in controlling the freight rates charged in southern Manitoba. This would include:

   - development of means by which the grain could be moved in bond to a transfer elevator and then by barge to ship loading facilities on the gulf.

   - development of cleaning and blending facilities that could process the grain to meet our export standards.

4) development of cleaning facilities to clean canola to export standards prior to shipment to the west cost.

The (SIRF) System Improvement Reserve Fund might be utilized in developing these alternatives.

An expansion of the highway weight inspection program may warrant being added, - particularly in the areas most affected by changes in trucking (south central Manitoba see Sections 3 and 6) during the period of road restrictions to reduce the negative affects of the modal shift.

4.5 Regulatory and Institutional Constraints of Southern Routes

Most of the institutional and regulatory constraints that would apply to grain exports through the United States have been discussed in conjunction with other aspects of this alternative in previous sections. This section is a summary of some of the key factors. The relative impact and importance are discussed elsewhere in this report.

In summary the key regulatory factors include:

1) Cleaning and blending is dealt with in section 2.5 and identifies the need for facilities that can process the grain to meet Canadian export standards. To minimize secondary handling these facilities would be most appropriate at Minneapolis or St. Louis. Also since direct trucking of the grain is the most cost effective means of shipping the product (at least to Minneapolis) real questions would arise as to whether the grain being received at Minneapolis were indeed Canadian grain. Resolution of this constraint should also consider the following two alternatives:

   - construction of facilities at Emerson to receive by truck and ship by rail directly to New Orleans ship loading facilities,

- adjustment of the export regulations such that Board grains could be cleaned at country elevators and shipped via rail in bond to either Minneapolis or New Orleans.

2) The ability to assure the integrity of the grain would be very difficult. In order to maintain the integrity, the shipments would have to be in large enough lots to totally occupy a barge load or unit train loads which would have to be assembled by the railway company or organizations like the grain companies or the GTA. The shipments would also have to travel in bond under seal. This does not present a problem for rail shipments or barges but may for truck traffic. Bonded truckers would have to have their gates sealed at the point of exit from Canada.

3) Final inspection of the grain at port by the Canadian Grain Commission would either mean stationing inspector(s) in the U.S. or adjusting the inspection requirements to permit inspection further upstream in Canada.

4) Many of the hopper cars used to haul the grain (if it were to be shipped by rail) have been provided by the governments for use in transporting Canadian grain. Some means of exercising control over the return of these cars should be developed prior to allowing them to move south of the border.

5) The WGTA would have to be amended to permit the export of grain through the U.S.

6) The right of access to the American transportation routes (which relative to the Canadian routes are highly subsidized) by Canadian grain may be questioned during those years when the capacity of their system is being tested by exports of American grain. Canadians may be asked to pay a

premium to offset not having supported the route with their tax revenue, or given restricted access to the route.

7) The CWB in establishing the initial prices for export grains will have to make a greater allowance for freight costs that may vary from one time of the year to the next and from one year to the next in a much less predictable fashion than has traditionally been the case under the regulated freight rates in Canada.

8) Since none of the grain shipped south would produce revenue for the facilities in Canada, this would increase the unit operating cost of the Canadian system. The eastern ports are currently under-utilized and diversion of grain south would exacerbate the difficulty they are currently having in cost effectively servicing export markets.

4.6 Summary of Regulatory Impacts

The possible change in the MOP would have significant implications for further change in the regulatory environment in the grain handling and transportation sector. A few of those general changes have been identified in this section.

It is very important to analyze the impacts of a possible change in MOP (and examine the many alternative payment mechanisms described in Discussion Paper #2, Section 1) with a clear recognition that many indirect changes will occur. Significant changes in regulation and a trend to deregulation would appear to be potential outcomes.

5.0 INFRASTRUCTURE AND HANDLING IMPACT ANALYSIS

The transportation and handling systems in Manitoba are in an evolutionary state and will continue to be regardless of the MOP. The rising operating and fixed costs, the shrinking value of grains relative to other commodities, the changing value of one grain type compared to another, and the impact of other transportation modes etc. all impact upon one another to effect the transport system which shifts and adjusts over time.

In order to appreciate the impacts of changing the MOP however, they must be differentiated from the impacts that are likely to occur regardless of the change in the MOP. Section 5.1 outlines the likely changes in the transportation and handling systems that are expected to occur within the foreseeable future. This includes the changes to the rail system, country elevator system, and the provincial and municipal roads in rural Manitoba.

5.1 Future of Transportation & Handling systems under the Status Quo

5.1.1 The Rail System

The railways are currently being compensated for the cost of maintaining all of the branch lines that remain in the system and that are classified as being "grain dependant". There is therefore, little incentive for the railway companies to abandon rail lines. Also, since the farmers are not paying the full cost of the freight, they have no reason to request abandonments.

In addition, virtually all of the lines left in Manitoba are either main lines or are included in the group of branch lines that were guaranteed to the year 2000 by the Government of Canada. The railway companies must first apply for an "Order in Council" before requesting permission from the NTA to abandon a line.

Rates charged for freight are established annually by the National Transportation Agency according to the formula set out in the WGTA. Applications for special rates or point specific discount rates must be filed at least one year in advance and the application must undergo public hearings prior to being permitted. There is then the means for adjusting freight rates but no particular impetus to do so on the part of the railways or individual farmers.

Beyond the year 2000, applications for abandonment should be expected on the following lines:

CN:
- the Cowan sub from Swan River to Dauphin
- the Winnipegosis sub from Fork River to Sifton
- the St. Rose sub has now been closed,and
- the Rossburn sub from Neepawa to Russell

CP:
- the Lac du Bonnet sub from Molson to Lac du Bonnet
- the Winnipeg Beach sub from Selkirk to Riverton
- the Russell sub from Inglis to Russell
- the Carman Spur from Carman to Elm Creek
- the Gretna sub from Gretna to Altona
- the Lyleton sub from Waskada to Deloraine

5.1.2 The Country Elevators

Figure 5-1 contains a summary by shipping block of the probable rationalization that is yet to take place in the country elevator system. It should be noted that this summary is based solely upon a review of the average volumes of grain handled at each point and comparison of this with the throughput needed to justify replacement of facilities as the existing ones wear out. A much more detailed analysis would be needed as a basis for investment decisions both in elevator facilities and in roadway impact forecasts. It should be noted that this listing is based upon the assumption that the status quo prevailed - ie. that WGTA rates and the constraints to abandonment of rail lines that are now in place continue to the year 2000 and no change occurs in the method of payment.

		Delivery Points		Elevators	
Shipping Blocks		Current	Future	Current	Future
CN:	Winnipeg North	11	6	12	7
	Winnipeg South	28	13	40	14
	Winnipeg West	21	10	24	11
	Brandon North	9	0	11	0
	Brandon West	2	2	4	4
CP:	Melville	3	3	4	4
	Dauphin	19	10	30	19
	Keewatin	21	10	30	12
	La Riviere	37	21	60	29
	Carberry	30	20	37	21
	Brandon	14	10	20	13
Total		195	105	272	134

Of these some 30 elevators should be expected to close within the next few years as their throughput would indicate that they are not even meeting their fixed operating costs. The balance would be expected to reach the end of their reasonable operating life within the next 15 years.

This significant reduction is in addition to and a continuation of the approximate 50% reduction in the number of operating elevators that has taken place over the past 15 years.

5.2 Impact of Full WGTA Rates

The previous section described the evolution which will occur even with no change in the MOP, i.e. retention of the status quo. This section now discusses potential change under a pay the producer MOP with full WGTA Rates being paid by the farmers.

5.2.1 The Rail System

This scenario holds dramatic impact on the railroad companies even though their rate structure would be unchanged. They would be receiving the same rates as now and would not be inclined to actively seek line abandonments or other adjustments to their system of rail lines.

However, given full WGTA rates, farmers would attempt to shift away from the rail system to direct trucking for much of Manitoba and particularly from the eastern half of the province. In an effort to stem the loss of freight, the rail companies may encourage the creation of producer car loading stations owned and operated by grain brokers or trucking companies, and might make application for a rate adjustment down to commercial rates on their main lines to service these locations.

Trucking companies would initiate full scale operations hauling non-board grains to Thunder Bay. As more trucks became available, virtually all the grain moving to Thunder Bay could do so more cheaply by truck than by going through the elevator system.

With the increase in truck deliveries, terminal facilities in Thunder Bay for receiving trucks would be overtaxed, and construction of new facilities would be needed at all terminals. The street system in the city of Thunder Bay would not be able to cope with the trucks trying to move to the terminals. The province of Ontario would be concerned with upgrading Trans Canada Highway from the Ontario border to Thunder Bay to four lanes. Limited largely by truck availability and unloading capacity at Thunder Bay, some 500 truckloads per day might attempt to haul to Thunder Bay.

Obviously this is not, nor is it likely to become feasible. Either institutional constraints to trucking grain would have to be introduced or the constraints on the existing rail and elevator system would have to be revised to allow them to compete. A fully rationalized elevator system combined with commercial rail rates would reduce the competitive range of trucks to the area east of Winnipeg - enough to constitute competition for the railway companies.

5.2.2 The Country Elevator System

As with the impact upon the rail system, a rapid decline in throughput may be experienced by elevators, starting in eastern Manitoba and spreading west as the number of trucks available increased and the systems to accommodate trucks were created. The majority of the farmers in Manitoba could find their lowest cost freight rate to be to bypass the elevator system with trucks hauling direct to Thunder Bay. The companies in the elevator system would

not, by themselves, have the opportunity to rationalize and compete, since they together with the rail companies would each be dependant upon the willingness and ability of the other to offer rates that would be competitive with trucking.

With the WGTA rate structures the ability of the railways to offer competitive rates is severely limited. Not only are there lengthy processes to adjust rates, but the high cost lines are included in the average rate that is charged on all lines. Thus, the railways are limited in their ability to charge lower rates on high volume lines and compete with trucks. The truckers would then take all of the freight which could be accessed at rates that satisfied their costs and the railways would be left with that freight where the cost of servicing the market exceeded the revenues available from it. Over time, this loss of the most profitable volume could influence WGTA rates upward when the costing review is conducted each four years.

5.3 Impact of Full Commercial Rates

5.3.1 On The Rail System

It would require the rationalization of the elevator system and flexible rail freight rates (lower than WGTA) on low cost lines to allow the existing system (railways and country elevators) to compete with costs of direct trucking. A fully rationalized elevator system would have an average unit operating cost in the order of 25 to 40% lower than it is currently (see appendix "A"). Both the elevator system and the railway system will have to be very competitive in order to bring costs to a competitive level and prevent farmers from attempting to shift throughput to direct trucking. They can not be as competitive as is necessary with the existing regulatory environment.

These regulatory adjustments would need to be carried out in a sufficiently timely fashion to allow the rail and elevator system to compete with the alternative transport modes and direction.

The following rail lines will be candidates for abandonment even if the status quo is retained and no change in the method of payment occurs. However, with pay the producer, the following lines may become uneconomic at an earlier date:

On the Cowan sub: From the abandonment of the Cowan and Winnipegosis subs increased maintenance and possibly new road construction could be expected on municipal roads. The majority of the grain production which has moved through the Ethelbert and Fork River elevators has come from south of the towns and now would be moving south and east or west onto highways #10 and 20. This would be a significant shift in direction of truck traffic. The volume redirected would be in the order of 40,000t per year.

Additional traffic on highway #10 west from Minitonas could be anticipated but no major change in direction.

On the Rossburn sub: At some point after the year 2000, additional maintenance costs would be expected on North - South connecting roads between Highways 45 and 16. Upgrading might also be warranted on PR #250 and 254 between Highways #45 and 16.

On the Lac du Bonnet sub: The change in direction would be largely on PR#317 which would experience more trucks travelling West.

On the Winnipeg Beach sub: The northern portion of this sub would cause little redirection of traffic other than what is already occurring with the

trucking program to elevators in Arborg. An additional 9,000t would move to Arborg (additional to what is already moving on that route).

On the Russell sub: the direction of traffic on PR #478 south of Inglis and PR#254 would reverse. Traffic volume on highway #83 north of Russell would increase by the volume from Inglis and Cracknell elevators (35,000 t/a).

On the Carman Spur: No change in direction and no significant increase in traffic would accompany the abandonment of this line.

On the Gretna sub: An increase in traffic (26,000 t/a) moving north on PTH #30 south of Altona might occur but with no change in direction on municipal roads.

On the Lyleton sub: Abandonment of this sub would cause significant redirection of traffic on both provincial roads and municipal roads. The underlying soil types would make the impact of direction changes on "non designed" roads severe. Some of what has moved to Waskada would move to Pierson and Melita as well as to Deloraine. The impact on the roads may exceed the cost of upgrading the sub.

The following rail lines would be retained for the longer term under the status quo, however, with a commercial rate scenario under pay the producer, these lines might no longer be economic (i.e. trucking would be lower cost) or might be sold to a short line rail operating company with the noted implications:

CN: - The Carman sub from Winnipeg to Graysville.

- The Miami and Hartney subs from Morris to Elgin,

CP: - The Arborg sub from Arborg to Winnipeg,

The Miami/Hartney sub was recommended for abandonment by both the PRAC (Prairie Rail Action subcommittee of the Senior Grain Transportation Committee), the Hall Report, and the Booz Allen report of 1979. The line has been upgraded under the federal government rail rehabilitation program to the full 260,000 pound capacity (fully loaded 100t hopper car). There are also a number of elevators in good condition on this track. The line receives over 300,000t of grain per year making it of real value to CN Rail who are not inclined to abandon it at this time.

On the other hand, both the La Riviere/Napinka subs and the Glenboro sub to the south and north respectively (both owned by CP Rail), are also in good condition, and draw similar or higher annual freight volume. Rail service within a reasonable truck haul distance for farmers now hauling to the Miami line would be available at one of the CP lines if the Miami line were abandoned.

The unit operating costs of the two CP lines would be reduced if they received the additional freight now carried on the Miami line. Additionally the unit operating cost of the elevators situated on the two CP lines would be substantially reduced by the increased throughput that would result.

Upgrading of the Miami line under the federal program would appear to have done little but postpone and make more difficult the decision to rationalize the branch lines in this area. Given the pressures of competition under fully commercial rates, the rail and elevator system needs all of the advantages of a fully rationalized system to compete with trucking and to efficiently move farmers grain.

Retention of the Miami line will force greater thinning of the elevators on the two CP lines than would occur if the Miami line were abandoned. Once thinned, the elevators would be slow to return in the more competitive environment of commercial freight rates.

The Arborg line might become uneconomic and be abandoned because of the relative costs to the railway company in continuing to operate the line. The alternative to direct trucking to Thunder Bay would be to truck to a main line in Winnipeg where much more competitive rail freight rates would apply than if they railways had to cover the costs of maintaining the line to Arborg.

Similarly the Carman Sub might be abandoned because it is less costly to truck the grain to nearby main lines or higher volume branch lines where the unit costs of operation are low enough to compete with direct haul trucking to port.

5.3.2 On the Country Elevator System

Like the railways and their rate structure, the country elevator system would have to reduce the handling charge to farmers to become more cost effective to compete with direct trucking to Thunder Bay and to Minneapolis. This reduction in operating costs can only come from accelerating their rationalization program of low throughput elevator closures and upgrading of strategically located higher throughput elevators.

Rationalization, which would otherwise take ten to fifteen years, may occur over a five year period. The impact of this rationalization will be minimized by the progress that has already been made by the major grain companies in rationalizing the system over the last 10 to 15 years and the construction of high throughput elevators that has already occurred.

The opportunity for incentive rates from larger car spots available under the WGTA structure has been effective in encouraging the construction of longer spurs at many elevators. Similarly, the low marginal cost of dual bucket elevator systems in new elevator construction and the substantial benefit in throughput that results has meant that virtually all the newer facilities are able to handle much higher volumes than the older facilities being closed. Nonetheless, significant upgrading of existing facilities in the form of longer loading tracks and in some cases larger truck scales will be needed as well as the construction of a number of new elevators. Most of the new elevators are already in the planning process. Associated with this is significant capital investment.

Rationalization will further diminish the storage capacity in the delivery system making control over the delivery of grain to terminals by the CWB even more difficult than it is now. Data collection and inventory management systems that more effectively monitor stocks on farm will be needed by the CWB to better control and direct their marketing efforts.

Similarly, the loss of storage in-land makes the storage capacity at terminal position even more valuable than it has been. Any inclination by the grain companies to reduce available space in Thunder Bay and on the St. Lawrence might warrant policy adjustments regarding payment for storage costs at the terminals.

A rise to commercial rates for export of canola seed through the west coast would make the removal of dockage prior to shipping the grain economical. Given average dockage of 8%, and cleaning charges of $4.50/t, virtually all of the seed moving west from the southeast region and south central regions could economically be cleaned in Manitoba. Because of low amounts of dockage contained in barley, it will continue to be cleaned at the terminals.

6.0 ANALYSIS OF IMPACT ON PROVINCIAL AND MUNICIPAL ROADS

The analysis of the impact of the various freight rate scenarios on the roads in Manitoba is very involved and complex. Our review has identified the likely changes in freight volumes and the modal shifts that would result from changes in the method of payment under several scenarios. We have also identified the changes that are likely to occur in the transportation and handling infrastructure regardless of the change in method of payment, i.e. with the status quo, so that the changes attributable to a change to pay the producer might be more readily distinguished.

Several Canadian and American studies assessing the impact of rail line abandonment on the maintenance cost of the affected road system have been reviewed. In addition, alternatives to abandonment have been reviewed.

Several significant points have been raised which warrant elaboration as they impact directly upon the capital and maintenance costs that the Municipalities and the Provincial Government will encounter as a result of changing the method of payment.

6.1 Quantifying the Impact

Whether the freight rate structures are changed or not, the rail and elevator system will undergo significant adjustment.

Under the status quo scenario direct trucking to either Thunder Bay or to Minneapolis would not occur. Some 400,000t of barley would be shipped out of province to domestic feed markets and most of this would, as at present, go by rail. Approximately 1 million tonnes of barley is exported from Manitoba every year. This is all trucked to the local elevators for shipment by rail both east and west.

Overtime the changes described in Section 5.3.1 will occur. Several of these rail line abandonments will occur because of high branch line operating costs - not elevator rationalization, and should therefore be evaluated by the province to assess the impact upon operating and maintenance costs for provincial and municipal roads. Prospective abandonments which are included in this category are:

- the Lyleton sub to Waskada,

- the Rossburn sub from Neepawa to Russell.

In specific cases the cost of maintaining the rail line may be less than the cost for additional maintenance on the road system that would result from both the increase in trucking and the change in the direction of truck traffic. If this is the case, there is a strong argument for retaining the branch line if appropriate cost sharing arrangements can be made.

With a change in MOP to pay the producer economic incentives will be created for farmers to utilize trucking to ship to Thunder Bay. Given the limitation on highway capacity and the large capital costs to expand capacity of the Trans-Canada Highway, the realistic option is to create a competitive environment which allows trucks to compete with railways, but this would only occur for a total volume within the capacity of the highway to Thunder Bay which is economically desirable. This has been more fully described in Section 5.2.

The impact that adopting a fully commercial rate scale would have on the maintenance and construction of roads can be discussed in two general groupings:

1) changes precipitated earlier than would otherwise be the case,

2) changes that would not occur under the status quo scenario.

1) Changes that would occur earlier than otherwise would be changes in truck traffic (changes in volumes, distances, and direction) attributable to both the elevator rationalization and rail line abandonment noted in section 5.1.

To evaluate the impact of moving these changes forward in time, a detailed system analysis would need to be conducted that compared the existing system with a fully rationalized one. The rationalized one would be developed through a combination of a confidential survey of the elevator companies' rationalization plans, and "best estimates" based on familiarity with the system and how it operates. The product would be an outline of a "fully rationalized" system that could be used as a base for estimating the changes in trucking patterns that may result from the rail and elevator rationalization identified in section 5.1. These changes in the trucking patterns might take place seven to ten years earlier on average than would otherwise be the case under the status quo scenario.

2) Changes in trucking patterns would result from the abandonments noted in section 5.3.1. These changes would not otherwise occur if it were not for the change to commercial rates.

Several of the rail lines run through areas of predominately lacustrine soils that are high in clay and silt content. This means that the degree of damage due to changes in trucking patterns on "non designed" provincial and municipal roads will be greater than that predicted by methods of analysis developed to predict maintenance costs in Saskatchewan and Western Manitoba. The soils are prone to swelling and shrinking with changes in moisture content, frost heave, poor compaction, and structural instability.

Carrying out the analysis called for in items 1) and 2) above would require a great deal of detailed work. Such analysis should be included as an important factor in the rationalization and decision making process as it may have a significant impact on the deliberations.

6.2 Method of Analysis

Methods of analyzing the increase in maintenance costs attributable to an increase in truck traffic on paved roads have been generally accepted in both Canada and the U.S. The term "paved roads" used here includes all those having a subgrade made up of compactable materials which are low in silt content, a subbase of well graded granular material and a topping of "A" base (or other well graded granular topping), asphalt or concrete. Much less predictable is the correlation between truck traffic and maintenance costs on non "paved" roads - those roads which were constructed by scraping up top soil and putting granular material on top.

The "non-paved" category includes the majority of the municipal roads in use as well as much of the provincial road system. The four main elements affecting the performance of roadways include:

- the underlying soil or subgrade,
- the pavement structure,
- the traffic loads,
- and the environment.

The underlying soil type relates to the stability of the road structure in terms of how much load it can carry without excessive damage, and to its stability with changes in environmental conditions in terms of swelling and shrinking with changes in moisture content, expansiveness during freeze thaw cycles, etc.

Roads made of soils having a high organic matter content (like topsoil) or high content of silt (a specific size range of soil particles that are highly expansive with water content, and highly susceptible to frost action) will have a low load carrying capacity and high maintenance costs associated with use by heavy trucks.

Most of the attempts made to estimate the impacts of traffic pattern shifts on road systems either ignored the impact on these low volume roads or applied the theoretical analysis that had been developed for "paved" gravel roads to approximate the changes in maintenance costs. Other studies assumed there would be negligible impact on the low volume roads or that there would be no change in traffic volume, and avoided addressing the difficulty of estimating the impact on these road systems.

Work to develop a basis for estimating such impacts has been done in Saskatchewan as a result of branch line abandonments that have occurred there, and as a result of changes in trucking patterns attributable to the development of the heavy oil reserves in the northwest portions of the province. This work could serve as a model for estimating the results of system rationalization and the impact of system adjustments resulting from a change in freight rates.

The specific method used to estimate the changes in maintenance on gravel roads in Saskatchewan however, does not appear to be directly transferrable to Manitoba. The predominant soil types in Saskatchewan are of morainal parent material which is much lower in silt content than those areas of Manitoba affected which are predominantly of lacustrine parent material (with the exception of the area north of Brandon affected by the abandonments of 1979/80). Applied research into maintenance costs for municipal roads built on lacustrine soils should allow adjustment of the constants developed in the Saskatchewan model to make the same approach useable in estimating the impacts in Manitoba.

Additional factors critical to the accuracy of the estimate of impact is the factors used for ESAL (Equivalent single axle load) rating of single and tandem axle trucks. Values recommended in the Saskatchewan model again appear to be most valid in that they recognize the greater damage potential of heavily loaded single tire front axles relative to the back axles.

Additional factors evident from the review include:

- affect of road maintenance, surface type, and bridge capacity on traffic direction should be included along with the analysis of the traffic pattern adjustments attributable to deletions of elevators or entire rail subdivisions.

- The greatest damage occurs from over loaded vehicles travelling on "non paved" provincial and municipal roads. The majority of farm deliveries to the elevator are during later May to the end of July - part of which is during the period of road weight restrictions. Municipal road restrictions need to be enforced and enforcement of provincial road restrictions need to be expanded to reduce the damage to roadways. Additionally, an educational program should be carried out to acquaint truck operators with the damage they cause travelling on soft roads. The cost of the enhanced inspection and educational program should be considered together with the impact of the changes in traffic patterns on roadway maintenance and construction costs attributable to changing the MOP that have been identified here.

  The percentage of the grain delivered during the soft road period of the year would reduced by the changes in regulatory environment encouraging more uniform deliveries throughout the year, and the elevator rationalization which would cause further levelling of the monthly rate of grain delivery to the country elevators.

Particular attention should be paid to estimating the impact of rail line abandonment on the maintenance costs for roads where there is a change in direction of traffic in addition to the obvious change in distance of travel.

APPENDIX "A"

Primary Elevator Operating Cost

Typical Fixed Costs of New Elevator: ($)

• Payroll	74,000
• Taxes & Utilities	32,000
• Amortization	198,000
Total fixed costs	304,000

Variable Cost ($/t)

• Maintenance	1.00
• Electricity	0.50
• Total variable costs	$1.50/t

Minimum Throughput Required (t/a):

Elevation charge of $10.10/t

$10.10 - $1.50 = $8.60/t net revenue

304,000t. / $8.60 = 35,350 t/a throughput required

Reduce Elevation charge to $8.10/t

$8.10 - $1.50 = $6.60/t

304,000t. / $6.60 = 46,060 t/a throughput required

APPENDIX "B"

"IMPACT OF MODAL SHIFTS ON MANITOBA JOBS"

A shift in demand for grain transport services from the railways to the trucking industry would have both direct and indirect economic impacts.

First, industry contacts believe that the loss of branch line traffic would not have a proportional and opposite effect on the number of railway jobs lost in the province. Many of the railway jobs in Manitoba have been located here because of policy decisions made by the railways to centralize certain functions rather than because of the local demand for transportation services. On the other hand, trucking is much less capital intensive and an increase in the demand for trucking services an be expected to have a much greater regional employment response, especially if trucks were moving grain to the mainline, rather than the export port. Therefore, an intermodal shift from rail to truck would be expected to have a net positive effect on regional employment in Manitoba.

Not only would the direct impact likely be positive, but so would the indirect impact. The railways industry in Manitoba has not had the amount of secondary industry supplying it as has the trucking industry. Secondary linkages supplying the railways are relatively few, mainly composed of several medium-sized foundries. Much of the railway activities is done "in-house" or in eastern Canada and is not related to the geographical location of the transport demand. Still, though the foundries are very sensitive to railway traffic, CN and CP are not their only customers - a significant amount of their business is also derived from B.C. Rail as well as some of the American railways.

Conversely, trucking companies expend considerable amounts on equipment, repairs, and parts in the local economy. However, most manufacturing is done out of the province, resulting in a relatively low value-added content. In total, it is expected the indirect impact from such a shift in transport modes would be positive, but it was not possible to verify this within the scope of this study.

SECTION III

Analysis of Impact on Rural Communities

1.0 INTRODUCTION

Historians and sociologists alike have long recognized the rather intricate balance between the prairie community system, agriculture, and the transportation system. Carle Zimmerman and Garry Moneo (The Prairie Community System in Canada, 1970) have provided a rather basic historical overview of how Canada's prairie community system grew up alongside major railway line-delivery points. This historical fact has led many observers to believe that changes to the transportation system will have dire consequences for rural communities. Other researchers, such as Gerald Hodge, are not so convinced of the vulnerability of rural communities and thus introduce other variables into the equation of community dynamics. Needless to say, however, changes to the method of payment of the Crow benefit, the CWB pooling basis, and the Western Grain Transportation Act would have both social and economic effects on rural communities.

2.0 PROJECT SCOPE AND METHODOLOGY

Other phases of the overall impact study dealt with alternative methods of payment and the various impacts associated with their implementation, most notably changes in production, transportation, and handling systems. This work has indicated that the method of payment may bring with it production shifts and changes to agricultural mix, farm revenues, and land values. These will, in turn, effect municipal tax base and the municipal tax revenues. Method changes may also have consequences for regional development by way of secondary processing. Insofar as community viability (economic and social) is inextricability tied to farm viability, these projections have been used along with information gleaned from community surveys to assess the potential effects of these changes on other rural communities.

The work was performed in three stages. First a search of relevant studies was carried out. Secondly, 11 Manitoba communities were identified which had lost their railroads over the past 10-12 years and these were visited. The purpose of doing so was to elicit information from community residents on the effect which abandonment had on these communities to use as a basis for projection in attempting to determine the effects which might be forecast should the change in the method of payment result in railway abandonment and loss of grain elevators. Finally, based on the first two phases, the impacts and implications of future abandonment and production shifts were predicted.

3.0 LITERATURE REVIEW

3.1 Introduction

The strength and health of rural Canada is difficult to measure because it is not simply a matter of studying numbers - although some numbers can give us a 'partial handle' on what is happening. What we are dealing with is not a series of isolated, independent places in Manitoba, but with communities which constitute parts of the prairie social, economic, and agricultural system, which is part of the Canadian economic system, which itself is a part of the so-called 'World System'.

The significance of this truism is, that we cannot simply look at rail line abandonment in an individual community and say whether or not it is 'good' or 'bad'. We must rather look at each community as part of a whole, and gauge whether the various processes involved are good for what has been termed 'the greatest happiness of the greatest number'. Of course, this greatest happiness factor is itself redefined continually and is at present being looked at in terms of Free Trade, Global Competition, and Economic Efficiency - that is to say, a quite different framework from, for instance, the late nineteenth century and early twentieth centuries

when excessive branch line construction took place with "high expectations of heavy settlement and high profits" (B.Wilson 1981: 131), or the mid 1920s when the prairie Wheat Pools were initially set up, and the desires of individual 'locals' for nearby elevators was a major driving force in spatial decision-making.

The consequence of this is that a serious re-evaluation of the prairie transportation system is necessary, as it was designed for the realities of the early twentieth century, and arguably not well-designed for that time period (rail line abandonment first occurred in the 1920s!). Inevitably a rearrangement of the rail, road, and community patterns over time, to reflect the perceived need for larger farms, fewer rail lines, larger elevators, and fewer settlements, disrupts the lives of many families. Many published reports touch on these facts, and endeavour to show how the disruption can be minimized, or at least reduced, at any particular time.

In addition to the simple economics of the railway and elevator features, other elements have to be factored into the equation, such as schools, roads, and other service functions that seriously affect the potential operations of a community. The chances are, however, and this is clear from the literature, that there are always likely to be winners and losers in any pattern of readjustment within the prairies.

3.2 The Literature

Very few of the major reports that have been written on prairie agriculture and rail transportation in recent years have taken a holistic point of view. Rather they have concentrated on one part of the problem, and then left it to others to see how the parts fit together.

Stabler (1973), in a lengthy study of Transportation and Prairie Communities also emphasized the complexity of economic activity at any particular point, but concluded that rationalization would lead to"significant long term cost savings" (p. 81). His report also had reservations, however, about who would pay the costs of the changes, and who would receive the benefits. This conundrum is a recurring theme in the literature.

It has been suggested that compensation will be necessary to remunerate both individuals and municipal authorities for the increased costs of being part of the 'rationalized' system. These costs would include the increased costs of on-farm storage, truck owning (longer distances with larger trucks); increased fuel costs (of running these trucks), increased time costs, and increased road building and maintenance expenses. A recent study by A. Wilson on the Brandon Area, which largely updates a 1974 study by The Canada Grains Council has cast doubt upon the gravity of these fears, in part because it is hard to measure these costs, and in part because it is difficult to separate these factors out from other critical points such as "the centralization of the school system and the greater mobility of the local population associated with an improved road system and almost universal ownership of a personal vehicle" (p. 5). Indeed, this whole question of greater mobility is one of the major problems involved in assessing the impact of abandonment upon communities. For most rural settlements are now part of the 'urban fields' of larger cities on an almost daily basis as a result of advances in television, radio, the telephone, and even newspaper delivery. These innovations, coupled with the improved highway systems within the province, mean that urban centres are now easily within reach of most rural residents, and loss of the rail connection is simply one more strain that is being added to the viability of small communities "which once depended on a captive local clientele for their livelihood" (B.Wilson 1981).

In addition to these more obvious costs, many residents of small towns also believe that the loss of the rail line would lead to their demise because farmers would cease to use them as service centres for markets and supplies. They perceive that this loss of business could prove critical to their survival, and in part because a town that loses its rail connection would be mentally written off by the people who used to visit it. This latter point of view was supported by a study completed by the University of Regina Sample Survey and Data Bank (1976) which predicted a massive loss of business to many small communities as a result of rail line abandonment. These conclusions are, however, seriously doubted by other authors. Barry Wilson concludes that "rail line and elevator abandonment does not cause but follows the decline of the community" and this position is supported by many of the conclusions of the Hall Commission, by research published by Stabler in 1979, and by a recent study by A. Wilson in the Brandon Area (1988) who concluded that abandonment could only be held responsible for service losses directly related to the railway and elevator systems.

If all of this is so, can we say why communities are declining? Despite the emotional feelings to the contrary, it seems to be a function less of poor rail communications than good road facilities. As farmers and other rural dwellers take advantage of improved facilities and reduced travelling times, the small centres cannot compete with the larger ones. A. Wilson's study suggests that only a handful of significant service centres may eventually survive in the Brandon region, with other places assuming, perhaps, the position of rural convenience stores, much as 'mom and pop' stores serve urban centres. This improvement in communications is also tied up with other policies such as changes in school districts, hospital centralization, etc. that have nothing directly to do with the grain trade.

3.3 The Future

The future of the Manitoba small town has not been extensively reviewed, although such an attempt has been made for Saskatchewan (Dale, 1988; Strategy for the Development of Rural Saskatchewan 1985), but some tentative projections can be suggested. Although the overall level of prosperity in Canada is likely to be an important factor, the rural population of Manitoba will continue to decline further over the next few years as farm consolidation and rail line abandonment take a hold on the landscape. But the rate of decline is likely to moderate, and some observers, including some members of the Manitoba Government believe that a reversal of this trend may be in the works (B. Wilson: 1981: 120). This change results partly from an increase in hobby (or recreation) farmers and a trend towards intensification of production (see also Dunlop 1989). It could also be affected by the efforts of government programmes designed to stabilize the population as well as the efforts of the rural people themselves. Of course, the result would be a somewhat different rural landscape from what we have now, but it may contain enough people to support some small settlements. Certainly, in the past few years there has been a realization on the part of rural mayors and other elected officials that times and situations have changed, and that they must themselves become the forces of economic development, that they cannot simply rely upon outside agencies. This 'Community Spirit' aspect will be returned to on occasion, and is one thing that enables some settlements to defy the economic odds and survive. Certainly, if rural populations continue to drop, some rural service centres will suffer, because there will not be an adequate rural population base for long-term viability.

A change may be necessitated, in the agricultural production system of the prairies, by further rail line abandonment, with more grain production in some areas, and more cattle production in other areas, with the changes

dictated by the differential costs of production. Such changes may have major impacts on the offering of services - such as elevator operations - as well as on the very need for some settlements. However, it is unclear if increasing the production of livestock in Manitoba would affect changes currently occurring in that sector of the wider world economy in a supply and pricing sense.

A further result is likely to be the erection of larger higher throughput structures, or at least the rebuilding and re-equipping of the contemporary buildings to make them more suitable for today's operations. For example Alexander has now become a "Pool" point exclusively, after a trade with Paterson, that left Minto the exclusive preserve of that latter company. High throughput elevators are probably going to continue their increasing significance. "Inland Terminals" do not appear to be increasing their limited presence. Predictions made in the early 1970s that the number of elevators be reduced to between 150 and 200 now seem unlikely (Kulshreshtha and A. Wilson, 1971b: 7:28). Currently there are some 1700 elevators on the prairies, down from a high of nearly 5800 in the early 1930s, and some 3500 a decade ago.

Another factor which initially seems antithetical to this need for government intervention, namely the presence or absence of the intangible factor of "community spirit" and local leadership, could have a similar positive effect upon community stabilization and growth. If enough people in a settlement actively work for survival, then success is possible. This is not to say that all communities will be maintained, but some will be able to "defy the economic odds" if their inhabitants want to work at it. There is a caveat, that such communities have to be situated in a potentially successful location - on or near a transportation corridor for instance, and not in a bad physical environment. But most of the poorly located centres of service are already dying or dead. Probably government

support to many settlements coupled with the right attitude on the part of their inhabitants could ensure survival. This, of course, raises the question of exactly what a community can do to help itself. For an extended discussion of possible strategies, case studies of successful 'bootstrap' stories have been compiled (McGuinness, 1989), and strategic planning for rural development has been presented in a WESTARC report, 1989 entitled "Strategic Planning for Rural Development". Despite all of the research undertaken and reports written on the topic, a comment from Barry Wilson in 1981 still applies. "One of the most controversial questions about rural decline has been the role of rail line and elevator consolidation in the process" (p.137). It is unclear whether this role will be determined in the immediate future. Clearly more work needs to be done in this regard.

We note that the newly established Rural Development Institute at Brandon University intends to focus its efforts on attempting to identify the factors which do contribute to rural decline and on how to overcome them to maintain viability. To the extent that this is realized this is a most welcome development.

4.0 COMMUNITY SURVEY RESULTS

The Effects of Railway Abandonment and Elevator Closures on Rural Communities in Manitoba

In the process of updating the community information base in general, a number of communities which have lost their railways in the last 10-12 years were visited. Rail abandonment came as no surprise to the residents of the eleven communities visited. The rail service had been reduced to grain transportation while other goods were already being trucked into these communities and other commodities were being trucked out. The anticipated

impact of rail abandonment on communities was rather traumatic in most of the communities visited. The statement was made by one resident that "there was a great deal of confusion" among the residents of affected rural communities at that time. It appears that because railways gave rise to most communities there was the perception the loss of the railways would spell their demise. The communities visited suffered initial setbacks but most of the communities regrouped their resources to survive and prosper. Those communities serving larger areas were not affected as seriously and rebounded more quickly than communities with a relatively small service area.

The impact to the business district and residents of communities was relatively minor. The impact on the village business community was somewhat different from the impact on the farm community.

The following table provides statistical information relevant to this report.

	Rail Line	Population		
Community	Abandonment	1951	1976	1986
Kelwood	1979	370	234	158
Langruth	1984	303	158	157
Rorketon	1982	388	247	227
Winnipegosis	1983	984	956	832
Fisher Branch	1986	322	529	429
Notre Dame de Lourdes	1978	575	691	628
Rapid City	1978	391	412	447
Hamiota	1980	663	765	816
Kenton	1980	236	176	182
Oak River	1980	242	221	164
Alida, SK	1976	106	163	188

This portion of the report is the result of visits with municipal officials and residents of the above eleven communities who were asked to discuss the effects of rail abandonment and elevator closures on the village and farm communities under the following headings:

- Business activity - agri business
  - main street business
- Employment opportunities
- Community services
- Community infrastructure
- Tax base
- Roads
- Agricultural producers
- Community residents
- Investment climate - real estate
  - farm land
  - viability of farm and business

4.1 The Impact on the Business Community

The loss of rail service had varying degrees of impact on the business community.

Agri-business. The agricultural inputs such as fertilizer, agricultural chemical and feeds are purchased mainly at point of grain delivery. When the elevators disappeared there was a shift of this business to alternative points of delivery. Agricultural supply outlets which are not associated with an elevator have had to adopt sales and service tactics which maintain or enhance their share of sales volumes. Some aggressive agricultural input supply firms have been able to maintain or improve their sales since rail abandonment. Agricultural input supply businesses are presently flourishing in Hamiota, Oak River, Alida and Notre Dame.

Main Street Business. Grocery outlets have had to compete with larger centres in order to survive. Most communities in this survey maintained or increased their volume of business. The grocers in these communities claimed that they

have to be alert to competitive pricing. All communities have maintained at least one grocer outlet.

The degree of impact from the loss of railway service on other mainstreet businesses is difficult to determine. It is interesting to note that varying degrees of blame for business losses are claimed by respondents. They generally agree that most of the losses in business are due to:

- Loss in rural population.
- Downturn in the agricultural economy.
- Centralization practices of farm equipment companies, automobile companies, banks and education services due to economies of scale.
- Not all communities have aggressive attitudes that have enabled some business communities to maintain and improve their services in spite of adversity.
- The attitude of local residents and their lack of desire to support local businesses.

For some rail line abandonment served as a motivating factor. The communities of Alida, Notre Dame, Hamiota and Fisher Branch are communities where there is a feeling among the businessmen, residents and farmers that the community is important to them. Local support for and pride in their community is evident. It appears that this spirit is responsible for the developments which took place.

- Communities where developments occurred and the nature of some of the developments are as follows:

  .. Hamiota has become a regional health centre.
  .. Notre Dame has increased the number of teachers by offering full French in their schools.

- Alida has made the most of oil and gas development.
- Fisher Branch has an off-line grain elevator.
- Winnipegosis has a "core box" factory.

4.2 Impact on Employment

All of the communities surveyed reported direct net losses in employment following railway abandonment except Hamiota and Fisher Branch. The communities reporting net losses were as follows:

Community	Jobs Lost	People Lost
Oak River	2	10
Kelwood	1	2
Langruth	4	11
Rorketon	5	16
Winnipegosis	2	6
Notre Dame	2	4
Rapid City	5	13
Kenton	2	6
Alida	2	11

On the other hand there was an increase in commercial trucking of grain in most communities. This provided some employment.

4.3 Impact on Community Services

It was difficult to apportion the degree of impact of the loss of rail service on community services. Although residents feel that there was some impact on these services, other major factors affecting the use of these services were stated as:

- depopulation of village and farm community
- centralization of services such as professional services, banking, farm equipment and automotive dealership, and schools to larger centres.
- aging population
- the change of marketing and shopping patterns
- downturn in the agricultural industry

Depopulation has taken place throughout rural western Canada as capital continues to replace labour. Most rural communities do not offer many job opportunities for young people so the migration to larger centres continues. Agriculture's downturn in the past 8 years has added pressure on all rural communities' services. Professional and banking services are becoming more specialized and centralized to serve a larger community creating a loss of small community service.

All of the communities felt that loss of rail service was but one factor in their problems of maintaining their community services.

4.4 Impact on Community Infrastructure

Except for Hamiota, Notre Dame, Alida and Fisher Branch, communities are finding increasing difficulty in maintaining their infrastructure - skating rinks, schools, fire districts, curling rinks are cited. The cause of these difficulties is not blamed on loss of rail service - no community surveyed has closed any of these facilities. Some communities have recently built new skating and curling rinks: Hamiota - $1.3 million, Oak River - $1 million. Rapid City - grass green's being promoted for their golf course.

4.5 Impact on the Tax Base

The impact of rail loss has affected the tax base of the various communities differently. The following table provides some indication of the losses.

Community	Type of District	Tax Loss to Village	Tax Loss to R.M. including Unincorp. Village
Langruth & R.M. of Lakeview	Unincorp. Village		8.5%
Rorketon & R.M. of Lawrence	Unincorp. Village		2.8%
Hamiota	Incorporated	2.5%	
Oak River & R.M. Blanshard	Unincorp. Village	83.4%	10.8%
Kelwood & R.M. of Rosedale	Unincorp. Village	50.0%	6.0%
Winnipegosis	Incorporated	1.0%	
Fisher Branch	L.G.D.	No Change	
Notre Dame	Incorporated	1.0%	
Rapid City	Incorporated	3.8%	
Kenton & R.M. of Woodworth	Unincorp. Village	20.0%	1.0%
Alida & R.M. of Reciprocity	Unincorp. Village	20.0%	1.0%

Some mitigating factors eased the loss of tax base for residents of various communities. Most communities have benefited by recent reductions of school taxes on farm land and from homeowner grants. Some communities have had other increased activities within their boundaries. Notre Dame community has a new housing development on the former rail property which has increased their tax base well beyond the rail era. Alida, Sask. has had oil and gas well development and also major pipelines trenched through the community. Oil and pipeline companies presently pay 71% of the municipal taxes in the community. Hamiota has had new senior citizen's housing, a senior citizens home and multiple housing built in the village increasing their tax base. As a matter of interest a new arena is being built on the former rail property.

4.6 Impact on Roads

All communities complained about the increased costs of municipal road maintenance. The major reason cited was the increased traffic of larger trucks

and heavier loads. All rural municipal governments included in the survey indicated that the major damage to roads resulted from spring road restrictions being enforced on P.T.H. and P.R. roads. Rural municipalities place load weight restrictions on their roads but they do not enforce them. Municipalities are not compensated for this increase of maintenance costs by either senior governments. They recommend:

1. Municipal road restrictions should be enforced and an educational program should be carried out to acquaint truckers with the damage caused to soft roads.

2. That senior governments should make grants available for the construction of new roads to market standards.

3. Senior governments should provide assistance for the maintenance of municipal roads in municipalities affected by loss of rail service.

4. The provincial government should increase the number of miles of P.R. road to ease municipal road maintenance costs. Traffic patterns have changed in some of the communities where roads were designed to accommodate traffic in other directions.

While the current Federal Government policy does not include expenditures on intra-provincial roads, the RMs have expectations that senior governments would assist with these increased road costs. Given the Federal Government policy, it would appear increased pressures would occur on the province.

4.7 Impact on Agricultural Producers

Producers who are faced with increased miles to transport grain claim that the added miles increase their costs of production. They consider that the indirect

costs of owning larger, newer trucks can be partly attributed to the loss of the local elevators. Cropping patterns are not affected by rail loss until the distance to the closest delivery point reaches more than 20 miles. Those rural communities who have farmers with distances up to 50 miles to delivery points indicate the following:

1. An increase in acreage of forage crops for sale.

2. An increase in forage crops for seed production.

3. An increase in cattle numbers.

4. Some increase in oil seed crops. The communities indicating these changes are: Langruth-Lakeview, Rorketon-Lawrence and Winnipegosis-Mossey River.

Other problems which were cited were:

1. The railroad beds are not being maintained or improved at some alternate delivery points. Poor rail service at Fork River is cited by producers, elevator operators and municipal officials. These people claim that the farmers of Winnipegosis, Fork River and Rorketon areas are being forced to deliver to Dauphin where improved rail transportation is available.

2. New elevators are providing producers with streamlined service. Producers appreciate the service offered at the new elevators facilities. However, some farmers with small trucks without hoists claim that some elevators do not have hoists to empty their trucks.

4.8 The Impact on Community Residents

The initial impact of the loss of rail service was rather traumatic in almost all communities. The down turn in the attitude of most community residents did not last long. A desire to survive, compete and prosper prevailed in most communities. The fear of losing the community had some beneficial effects. Some of the businessmen claim that hard times are not necessarily bad times for small business communities. During times of financial stress residents are more inclined to shop at home.

In retrospect residents of affected communities have drawn closer together and assessed the value and the future of their community. One community indicated that the loss of the post office would be more devastating to main street business than the loss of rail service. They cited the stop at the post office as an invitation to shop in adjacent businesses. The construction of a new post office in Alida was indicated as one of the reasons for some increase in shopping.

4.9 Effects of Rail Abandonment on Investment within the Community

Various reasons were expressed for problems in the real estate market of affected communities. In communities with a downturn in their real estate values the loss of rail service is quoted as part of the reason. Most people interviewed in the survey agreed that farm land values and village residential and business real estate values were not affected to the same degree. Village real estate values in most of rural Manitoba are decreasing rapidly. This decrease is occurring even along main line railways.

All communities claimed a reduction in farm land values varying from 25% in Alida which is in keeping with general land price decline in that area to 50% in Rorketon and Langruth where the land values in that crop district generally

increased. It is difficult to draw conclusions on the effect of railway abandonment on land values but it appears that the effect is greater where alternate delivery opportunities are limited to one direction. The depression in village real estate values varied from little change in Notre Dame and Alida to a considerable downturn in values in Oak River, Langruth and Rorketon.

All communities agreed that it was very difficult for young people to start farming because of the high investment required, the cost of money and the comparatively low returns for agricultural products. Young farmers who had started farming in the past 5 years had largely started with the assistance of a benevolent parent. Others have started by virtue of steady off-farm income.

The responsibility for depressed real estate markets was placed mainly on the following realities:

1. The downturn in the agricultural economy.

2. The aging population in the community.

3. Lack of employment opportunities in rural villages and on farms.

4. Shopping and marketing patterns.

5. Centralization of farm equipment, dealers, automotive dealers, banks, schools, retail and market outlets and professional services.

6. Depopulation of rural areas.

In summary, the negative impact anticipated by communities faced with the loss of rail service did not occur to the degree anticipated in any of the communities surveyed. The desire of the community to persist; the pooling of human and

physical resources coupled with a positive attitude towards the future enabled the communities to maintain their infrastructure and the business community. In some instances the community grew and prospered. There is no doubt that the centralization of markets and services have a negative impact on communities. These factors are definitely adding to the cost of production of agricultural products and are increasing stress on small communities. The loss of rail service is only one of the factors stressing some small communities.

To quote from the Hall Commission report: *"It has become evident to the commission that community viability can only be perceived; it cannot be defined. It is the people and the spirit of the people which gives the community viability, not the railways and the elevators."* Our survey of communities indicate that this is true.

5.0 POSSIBLE FUTURE CHANGES

On the basis of the above information probable impacts of changes of MOP on several areas of Manitoba are considered. In doing so it is recognized the projections based on either surveys or statistics are imperfect at best.

As indicated in the results of discussions there were limited production shifts except in those communities where alternate grain delivery was in one direction. However in most cases there was neither a large increase in mileage to alternate points from abandoned lines nor was there a large increase in producer costs of grain shipment. Should the method of payment be changed and commercial rates charged for railway haulage then many farmers will likely abandon the high cost low volume rail subdivisions in favour of commercial trucking.

Based on these potential abandonments each of the communities in the subdivision was identified and an attempt is made to assess the possible social consequences of the development.

To put each community into perspective from the standpoint of the rail and grain handling facilities a short statistical history of the grain and rail element is presented.

It is important to identify the difference in the demographics of the various communities as well. Therefore population changes are noted. To indicate the variation in the demographics of the users of the various delivery points 3 factors are used, relative age of farmers, their level of farm capitalization and proportion of the farmers who can be termed "commercial" farmers by census definition.

Hereunder is a short description of the affected areas by subdivision and community.

The selected information is provided for the purpose of indicating some important criteria which affect the perceived viability of rural centres. Population is generally indicative of the range of services which a community has to offer. The elevator capacities and handle indicate the relative importance of the point from the grain standpoint. It should be pointed out that the industry currently considers a handle of 25,000 tonnes annually to be necessary for an elevator to be economically viable. Very few of the points on lines which are candidates for abandonment reach handles of this level. It can be assumed, therefore, that many of the delivery points will be closed with or without railway abandonment.

The proportion of farmers with farm sales of over $25,000 is indicative of the percentage of full time farmers in the area. The average level of farm capital is indicative of the relative prosperity of the area while the proportion of the farm population over 65 years of age is indicative of the nature of the farm population of the district.

<u>CN Cowan Subdivision, N. Jct. - Swan River 98.5 mi.</u>

Much of this subdivision passes through an area of relatively low agricultural productivity. Those points which do have significant grain handle such as Ethelbert

will be quite isolated if rail is removed and will likely cause a significant shift in production. Minitonas, on the other hand, is in close proximity to Swan River and would be affected to a lesser degree.

Sifton
- population: 1951 - 315, 1986 - 206
(1) - grain companies: U.G.G.
(2) - average 10 year handle - 9,200 tonnes
(2) 1987-88 handle - 7,200 tonnes
- source of grain - R.M.'s of Dauphin and Mossey River area
(3) - % of farmers with sales over $25,000 - 56%
(3) - average farm capital - $210,000 or 60% of provincial average
(4) - 15% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Dauphin 31 km

Fork River
- population: 1951 - 226, 1986 - 75
- grain companies: M.P.E.
- average 10 year handle -13,400 tonnes
1987-88 handle -16,100 tonnes
- source of grain - R.M.'s of Dauphin and Mossey River area
- % of farmers with sales over $25,000 - 56%
- average farm capital - $210,000 or 60% of provincial average
- 15% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Dauphin 42 km

(1) - Grain Elevators of Canada, Crop Year 1988-89
Canada Grains Commission
(2) - Grain Deliveries at Prairie Points, 1987-88
Canada Grains Commission
(3) - Statistics Canada

(4) - Manitoba Health Services Commission, 1988

Ethelbert
- population: 1951 - 491, 1986 - 411
- grain companies: M.P.E. and Cargill
- average 10 year handle -20,900 tonnes
  1987-88 handle -16,800 tonnes
- source of grain - R.M. of Ethelbert area
- % of farmers with sales over $25,000 - 35%
- average farm capital - $185,000 or 50% of provincial average
- 18% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Ashville 43 km, Dauphin 60 km

Minitonas
- population: 1951 - 678, 1986 - 559
- grain companies: M.P.E.
- average 10 year handle -20,100 tonnes
  1987-88 handle -15,700 tonnes
- source of grain - R.M. of Minitonas area
- % of farmers with sales over $25,000 - 65%
- average farm capital - $336,000 or 95% of provincial average
- 10% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Swan River 16 km

<u>CP Winnipeg Beach Subdivision Selkirk - Riverton 59 miles.</u>

The only point of agricultural significance to the north of Gimli which is served by this subdivision is Riverton. If the subdivision is retained as far as Gimli then deliveries would logically accrue to this point which is 40 km. south of Riverton.

Riverton
- population: 1951 - 786, 1986 - 635
- grain companies: M.P.E.
- average 10 year handle - 9,000 tonnes
  1987-88 handle - 6,500 tonnes
- source of grain - R.M. of Bifrost area
- % of farmers with sales over $25,000 - 55%
- average farm capital - $232,000 or 66% of provincial average
- 12% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Gimli 40 km or if the subdivision is abandoned from Selkirk north then the alternate delivery point would likely be Selkirk 110 km.

Netley
- population: 1951 - 30, 1986 - 27
- grain companies: M.P.E.
- average 10 year handle - 10,700 tonnes
  1987-88 handle - 21,700 tonnes
- source of grain - R.M. of St. Andrews area
- % of farmers with sales over $25,000 - 42%
- average farm capital - $292,000 or 83% of provincial average
- 9% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery points - Selkirk 26 km, Teulon 26 km.

CP Russell Subdivision Inglis-Russell 12.5 miles

There are two grain delivery points on this subdivision to the north of Russell. The proximity of most of the producers to Russell will cause little change in production. However, those 15 or more kilometres to the north and east would be rather severely impacted and an increase in livestock in this area could be anticipated. Those who deliver grain to Cracknell would be little affected.

Inglis
- population: 1951 - 211, 1986 - 221
- grain companies: U.G.G., Paterson
- average 10 year handle - 22,200 tonnes
  1987-88 handle - 22,300 tonnes
- source of grain - R.M.'s of Boulton and Shellmouth area
- % of farmers with sales over $25,000 - 60%
- average farm capital - $253,000 or 72% of provincial average
- 16% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Russell 21 km.

Cracknell
- population: not significant
- grain companies: Paterson
- average 10 year handle - 12,200 tonnes
  1987-88 handle - 13,000 tonnes
- source of grain - R.M.'s of Boulton, Shellmouth, Russell and Silver Creek area
- % of farmers with sales over $25,000 - 60%
- average farm capital - $253,000 or 72% of provincial average
- 16% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Russell 13 km

CN Rossburn Subdivision Neepawa-Russell 104 mi.

Most of the subdivision serves an area immediately south of Riding Mountain National Park. Because of its location all alternate delivery points for elevators in this subdivision lie to the south. Although alternate delivery points are generally within a reasonable hauling distance (i.e. under 30 km) the total hauling distance for some farmers next to the park could be up to 45 km.

Following is relevant information on the points of this subdivision.

Clanwilliam
- population: 1951 - 203, 1986 - 80
- grain companies: M.P E.
- average 10 year handle - 17,000 tonnes
  1987-88 handle - 25,000 tonnes
- source of grain - R.M. of Clanwilliam area
- % of farmers with sales over $25,000 - 54%
- average farm capital - $245,000 or 70% of provincial average
- 15% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Minnedosa 12 km

Erickson
- population: 1951 - 483, 1986 - 565
- grain companies: M.P.E.
- average 10 year handle - 12,300 tonnes
  1987-88 handle - 11,700 tonnes
- source of grain - R.M.'s of Clanwilliam and Harrison area
- % of farmers with sales over $25,000 - 49%
- average farm capital - $235,000 or 67% of provincial average
- 27% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Minnedosa 30 km

Sandy Lake
- population: 1951 - 348, 1986 - 331
- grain companies: M.P.E.
- average 10 year handle - 13,100 tonnes
  1987-88 handle - 10,300 tonnes
- source of grain - R.M. of Harrison and L.D.G. of Park area
- % of farmers with sales over $25,000 - 42%
- average farm capital - $203,000 or 58% of provincial average

- 26% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Newdale 14 km

Elphinstone
- Closed 1988

Oakburn
- population: 1951 - 400, 1986 - 219
- grain companies: M.P.E., U.G.G.
- average 10 year handle - 24,400 tonnes
  1987-88 handle - 26,500 tonnes
- source of grain - L.D.G. of Park - R. M.'s of Rossburn and Saskatchewan area
- % of farmers with sales over $25,000 - 51%
- average farm capital - $230,000 or 72% of provincial average
- 20% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Shoal Lake 14 km

Rossburn
- population: 1951 - 586, 1986 - 664
- grain companies: M.P E., Cargill
- average 10 year handle - 22,100 tonnes
  1987-88 handle - 21,600 tonnes
- source of grain - R.M. of Rossburn area
- % of farmers with sales over $25,000 - 47%
- average farm capital - $229,000 or 65% of provincial average
- 15% of farmers are over 65 years of age compared to provincial average of 12% possible alternate delivery point - Solsgirth 30 km, Shoal Lake 36 km

Angusville
- population: 1951 - 224, 1986 - 141
- grain companies: M.P.E.
- average 10 year handle - 12,600 tonnes
  1987-88 handle - 17,000 tonnes
- source of grain - R.M. of Silver Creek area
- % of farmers with sales over $25,000 - 77%
- average farm capital - $382,000 or 110% of provincial average
- 11% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Russell 19 km

Silverton
- population: 1951 - 25, 1986 - 22
- grain companies: M.P.E.
- average 10 year handle - 15,000 tonnes
  1987-88 handle - 15,800 tonnes
- source of grain - R.M. of Silver Creek area
- % of farmers with sales over $25,000 - 77%
- average farm capital - $382,000 or 110% of provincial average
- 11% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Russell 9 km

CP Lyleton Subdivision Deloraine-Waskada 17.2 mi.

There are two delivery points remaining in this subdivision. Those delivering to Goodlands will be affected less due to their proximity to Melita. Some of those who deliver to Waskada have experienced the removal of the west end of the subdivision within the past 12 years. For these farmers the haul would be increased by up to 25 km. Little change in production patterns would be likely.

Waskada
- population: 1951 - 395, 1986 - 349
- grain companies: M.P E., Paterson
- average 10 year handle - 29,100 tonnes
  1987-88 handle - 38,700 tonnes
- source of grain - R.M.'s of Arthur and Brenda area
- % of farmers with sales over $25,000 - 79%
- average farm capital - $510,000 or 146% of provincial average
- 8% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Deloraine 35 km

Goodlands
- population: 1951 - 120, 1986 - 87
- grain companies: M.P.E.
- average 10 year handle - 16,200 tonnes
  1987-88 handle - 18,600 tonnes
- source of grain - R.M.'s of Brenda and Winchester area
- % of farmers with sales over $25,000 - 82%
- average farm capital - $516,000 or 147% of provincial average
- 10% of farmers are over 65 years of age compared to provincial average of 12%
- alternate delivery point - Deloraine 15 km

CP Gretna Subdivision Gretna-Altona 8.1 miles

This portion of the subdivision is located in an area of relatively intense production of special crops. Due to its location, close to the U.S. border, most of the deliveries come from the area to the east, west and north of the point. Due to the proximity to Altona additional mileage would be minimal.

Gretna
- population: 1951 - 608, 1986 - 503
- grain companies: M.P.E.
- average 10 year handle - 26,000 tonnes
  1987-88 handle - 27,000 tonnes
- source of grain - R.M. of Rhineland area
- % of farmers with sales over $25,000 - 75%
- average farm capital - $464,000 or 133% of provincial average
- 7.5% of farmers are over 65 years of age compared to provincial average of 12%
- possible alternate delivery point - Altona 13 km

6.0 IMPACTS AND IMPLICATIONS

To assess the likely changes to those communities which will experience railway abandonment in the future, some of the same factors are examined as were considered where abandonment had already taken place; namely, business activity, employment, community services, community infrastructure, tax base, roads, agricultural producers, investment climate, town or village real estate, farm land values.

Business Activity - Based on the experience of those communities which have had railways removed over the past couple of decades, the effect of railway and elevators removed on the businesses of community should be minimal. In most cases there will be little or no change in the trend toward decreasing rural population which is the main ingredient in most community businesses.

There is likely to be some significant change in location of some agri-business in that chemical and fertilizer suppliers generally associated with grain handling will likely be established independently in some centres where elevators are removed.

In those areas such as Ethelbert, etc. where farmer grain handling distances are increased beyond 32 km., there is likely to be an increase in commercial trucking and this could open a few business opportunities in themselves as well as contribute to employment levels in the truck servicing sector. Where the shift to livestock production occurs other business opportunities open up. The higher level of employment and, in many cases, better land use resulting from a switch to cattle would be positive for many communities. As pointed out in the section dealing with past experience, other factors such as economies of scale which cause farms to increase in size and the rural population to drop has a much greater effect on community business than railway or elevator removal.

Employment - The direct loss of railway and grain elevator jobs constitute the main change in employment due to railway abandonment. This is due in large measure to the fact that on most grain related lines railways no longer provide any services other than grain transportation. The development of trucking businesses and agricultural supply business will offset the decrease in elevator employment. An opportunity will exist for the development of local trucking businesses as more farmers opt for commercial trucking rather than increase the size of their own farm trucks for the longer haul. The effect of such a change on current commercial truckers is uncertain but, the scenario wherein new small businesses would be established, would be preferred to enlargement of outside firms. The latter, however, is unlikely due to the nature of the farm pick up.

Community Services - As the survey of communities which have lost their services indicated the effect of railway abandonment was minimal with respect to doctors, lawyers, accountants, bankers, etc. as compared to the effect of other forces such as farm population loss, centralization of farm equipment dealers and low farm prices. It is anticipated that the loss of railway and elevators will have similar minimal effect in the future. However, if employment is enhanced due to increased livestock production, trucking services and agricultural supply agencies, then improvement in community services could result.

Community Infrastructure - This would in large measure be unaffected by elevator and railway abandonment except that the removal of grain truck traffic in the streets of some towns and villages could be positive with respect to road maintenance.

Tax Base - One of the most negative effects of railway and elevator removal is the effect on municipal tax revenues. As was pointed out in the comments on other communities this loss can be very significant.

Roads - There is little doubt that the additional trucking required due to rail and elevator removal causes additional road costs. This is particularly true of municipal roads and some P.R. roads and is attributable in part to the fact that our P.T.H.'s generally parallel the railways. Therefore, when abandonment takes place the traffic patterns change, causing increased utilization of roads which were not constructed for heavy use. The possible abandonment of the Rossburn subdivision is a case in point. The closest alternate delivery points are all to the south and some of the roads which will be used will have to be improved to handle the heavier loads.

On the other hand, if commercial trucks are used to haul from the Ethelbert area to Dauphin, for example, and if these trucks operate on the P.T.H. within the restrictions placed on them, the road system could be less severely impacted than it currently is under overloaded single axle trucks using the roads when municipal restrictions are on but not enforced.

Agriculture Producers - As indicated elsewhere in this study shifts in agricultural production due to a change in elevator and railway abandonment will vary across the province due to a variety of factors. The effect on individual producers will also vary. Those producers whose grain delivery points are within 32 km. of their farm will be affected minimally by abandonment.

In the case of those farmers in the area of the Rossburn subdivision, the effects will be greater. If this line is abandoned the only grain delivery option open to them is

to the south. For those farmers who live to the north of the subdivision the increase in delivery distance can be significant. It is noted that many of the farms have lower incomes on average and their level of capitalization may indicate that they do not possess the nature of trucks necessary for the longer haul. It is likely that commercial trucking would be opted for in many cases.

In a similar manner those on the Lyleton subdivision in the area of Goodlands and Waskada would be affected by the single option of a northerly haul. Many of those currently delivering to Waskada have recently experienced the need to change their delivery points due to abandonment of the westerly portion of this subdivision. Naturally those producers most seriously affected by abandonment are those located in areas where alternate delivery points are not available on parallel rail lines. Therefore, the farmers on the Cowan subdivision are more severely impacted than most. In these cases, for many farmers, it will be either a case of shifting their production or opting for commercial trucking. It should be noted that average levels of farm incomes, levels of capitalization and average age of operators influences the effects which can be expected.

It should also be pointed out that in some cases current rail service is so poor that its removal may reduce the level of frustration of producers where alternate points or commercial trucking are available.

Effect on Investment in the Community. As has been stated before rail service on the branch lines which are candidates for abandonment has been applied almost solely to grain. Although it is perceived by many residents that a community cannot exist once rail service is removed this is in reality a nostalgic hangover of the days when rail was the main mode of transportation for people and goods. The effect on real estate values in villages and towns from the removal of rail and elevators appears to be minimal. Such is sometimes not the case with respect to farm land values. As was indicated in the case of Rorketon and Langruth land values in those immediate areas decreased even though land values in the crop district in general

increased. However, in other areas there was no apparent impact. It is anticipated that again those areas such as Ethelbert will experience some pressure on land prices when producers are forced to seek alternative production such as cattle. Little change in land values due to rail line abandonment are expected along most subdivisions.

SECTION IV

Analysis of the Impact of a Change in the CWB Pooling

1.0 INTRODUCTION

A change in the CWB price pooling system is a separate policy decision from a change in the method of payment. A revision to the pricing locations for the Canadian Wheat Board (CWB) pooling has been proposed in the past. It may be proposed again in the future. Therefore it should be understood and considered at the same time as any change in the method of payment.

An analysis of the impact of revising the pooling to Vancouver and the St. Lawrence (Montreal) from the existing locations of Vancouver and Thunder Bay was conducted. This revision would entail the calculation of producer prices for CWB grains based on the pooled prices received in Vancouver and St. Lawrence, less the freight deductions, rather than pooled prices based on Vancouver and Thunder Bay as at present. For elevator points in eastern portions of the CWB designated area, which would ship export grain east, deductions would occur for the primary elevator charges, rail freight and terminal charges, and additionally for lake transportation and transfer elevator charges.

As markets and marine transportation have evolved, the export position for eastern shipments has shifted from the traditional location of Thunder Bay to the current position on the St. Lawrence River, predominantly Montreal.

To conduct an analysis of the future impacts expected from a change in this policy, it is necessary to make assumptions regarding the proportions of the CWB grains moving through eastern versus western export positions. These volumes and percentages are shown in Appendix A, which document the assumption of 60 percent moving west and 40 percent east.

The CWB price pooling policy includes prices received from all export sales, from all locations, and includes them in the average pooled price. The primary elevator

prices which farmers receive are based on the pooled price, less the freight and handling deductions. These deductions are not dependent upon the export location to which the grain is actually shipped, but are based upon the designated point to which it is assumed shipments will occur. Manitoba prices are all based FOB Thunder Bay, even though some primary elevators ship significant portions of their grain to the west coast.

The question of price levels for west coast exports versus eastern exports is important only in analyzing the fairness and equity of the CWB pooling policy. The pricing system of the CWB pool assumes equal prices in each port. Therefore, in this impact analysis it is not necessary to conduct a review of export prices for each grain or each coast as the change in grain prices received by the farmers is the factor which determines the impact.

The pooling analysis does not apply to non-bard grains, including oats, flax and canola. However, there will be an indirect impact on non-board barley and feed wheat and to a lesser extent, oats, canola and flax. The non-board barley and feed wheat prices strongly influence the domestic market by the initial and final CWB prices. With a decrease in price on CWB barley and wheat, other prices will be influenced lower.

2.0 FREIGHT COST INCREASE

The costs for transportation (lake freight) and terminal handling from Thunder Bay to Montreal is approximately $21.12 per tonne. Under the CWB pooling, all producers selling grain in that pool contribute equally to these costs. Thus, if 60 percent of grain in the pool is exported from the west coast and 40 percent from the east, Manitoba producers only pay 40 percent of the $21.12 costs. The other 60 percent is paid by all others in the pool.

From this it can be seen that, based upon these assumptions, of 60 percent exported from the west coast and $21.12 in costs after Thunder Bay, some $12.67 per tonne ($21.12 x .60) extra would be deducted from Manitoba producers grain prices if this change in the CWB price pooling system was to occur.
Obviously, a $12.67 per tonne decrease in CWB grain prices, if without compensation, would have a dramatic impact in Manitoba.

If the Seaway costs rise the impact on Manitoba producers would increase. Also, if the proportion of the grain in the CWB pool shipped west versus east increases, the impact on Manitoba, if this revision to the pool occurred, would increase.

3.0 IMPACTS ON PRODUCTION

The net effect of changing the pooling policy would be to restructure transportation rates for western Canadian grain producers, and, specifically, to increase those for Manitoba producers. Given the timely nature of this issue, it is appropriate to analyze the consequences of a change in pooling.

The production shifts that occur from changing CWB price pooling from Vancouver/Thunder Bay to Vancouver/St. Lawrence would most directly affect the board grains. That is, such a change would result in Manitoba producers having to pay higher freight charges to get board grains to export position at the St. Lawrence points than those presently paid to put the same product at Thunder Bay, thereby reducing the farmgate price of board grains.

As described in Section 10 of Discussion Paper #2, a market absorption effect will offset some grain price decreases. The additional cost to export wheat would not be absorbed by the marketplace; therefore, the wheat price would drop by the full $12.67 per tonne. The marketplace is expected to absorb 50 percent of the barley freight cost increase.

Assuming market absorption with a change in pooling, there is more production of barley and oilseeds. Wheat production actually becomes the least preferred cropping alternative under this assumption. Livestock production is expected to expand more under this scenario than any other. As well, because Manitoba's livestock producers would face lower feedgrain prices than any other prairie province, the province could become a major livestock production region. With a revision to CWB pooling as described, grain producers who are designated to ship west and who sell through the CWB pool, would gain by the total dollars lost by Manitoba and others designed to ship east. Thus, while Manitoba grain producers would see lower prices and livestock production would expand, the opposite impact would occur in Alberta.

4.0 SUMMARY

While a revision to CWB pooling policy is a separate decision from a change in the method of payment, Manitoba has a strong interest in ensuring that the potential increase in freight costs is reviewed when a change in method of payment is considered.

If the Crow benefit payment to producers was to be implemented, it should be distributed on the basis of total freight charges which Manitoba producers may face, not just on rail freight costs. Manitoba farmers (or anyone having their grain priced FOB St. Lawrence) should not face the full unsubsidized costs of the seaway while other western grain farmers receive the Crow benefit on all their transportation costs. Also, as west coast terminals cannot handle all exports, it is in the interest of all western Canadian producers to ensure eastern export capacity is utilized.

APPENDIX A

Movement of Canadian Grain[1]

x 000 Tonnes

TERMINALS	83/84[2]	84/85	85/86	86/87	87/88	Ave.[3]
Vancouver	11,125	9,517	10,722	1,699	13,016	9,484
Prince Rupert	1,383	1,091	1,476	4,038	3,960	1,487
Thunder Bay	18.868	13.455	11.984	14.811	14.020	14.932
TOTAL	31,376	24,063	24.182	30.548	30.996	25.903
TERMINALS	As a % of TOTAL					
Vancouver	35	40	44	38	42	37
Prince Rupert	4	5	6	13	13	6
Thunder Bay	60	56	50	48	45	58
	% WEST versus EAST					
WEST	40	44	50	52	55	42
EAST	60	56	50	48	45	58

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[1] Source: P148 Factors ... Influencing the Movement of Grain in Western Canada, March 1989 CGC

[2] Stat Yearbook, P190 CGC

[3] 10 Year Average

Movement of Grain

- Over the last 5 years there has been a 3% annual increase in grain movement out of the west coast.

- This trend has been apparent over the last 10 years.

- More customers are wanting to take delivery of grain at the west coast.

- Pacific rim customers continue to be an important market of Canadian grain with increasing emphasis placed on this market as opposed to customers sourcing their grain from the Eastern parts.

- The trend to sending more grain west is expected to continue until it is offset by:
  - customer needs being met
  - congestion at the western ports
  - price discounts to move grain out of the eastern terminals

Recommend using a breakdown of:

60% of Canadian grain moving west
40% of Canadian grain moving east

for the future.